

40p

Printout No 4

Fortnightly August 4—August 17 1983

# LOAD RUNNER

THE GALAXY'S FIRST COMPUTER COMIC

**T**RAPPED INSIDE AN ENORMOUS COMPUTER **LOAD RUNNER** TAKES PART IN A TERRIFYING GAME OF **COMPUTER CHESS**. HE IS ABOUT TO FIRE UPON THE **BLACK KING** WHEN HE DISCOVERS HIS OPPONENT IS NOT A ROBOT BUT ANOTHER HUMAN BEING....

I'VE NO CHOICE! IF I DON'T ATTACK FIRST HE'LL KILL ME!

LOAD RUNNER IS ABOUT TO FIRE WHEN....

CHECK MATE!

THE COMPUTER HAS SHUT DOWN ALL SYSTEMS... I'VE STOPPED MOVING. THE **GAME'S OVER!**

A GAME OF LIFE AND DEATH

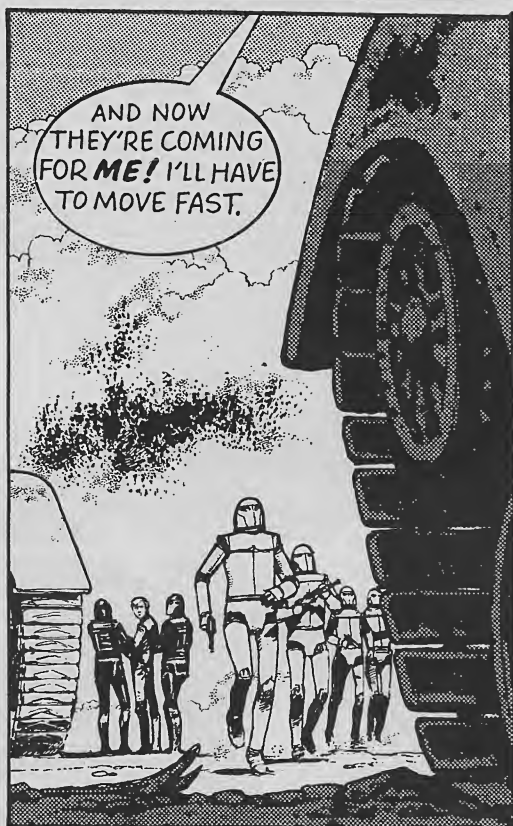
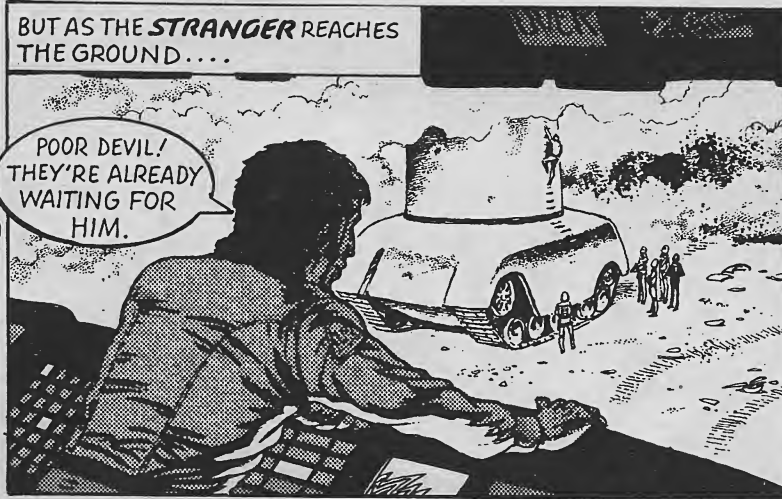
TRUMBULL'S WEIRD COMPUTER WORLD

25 VIRGIN GAMES TO BE WON

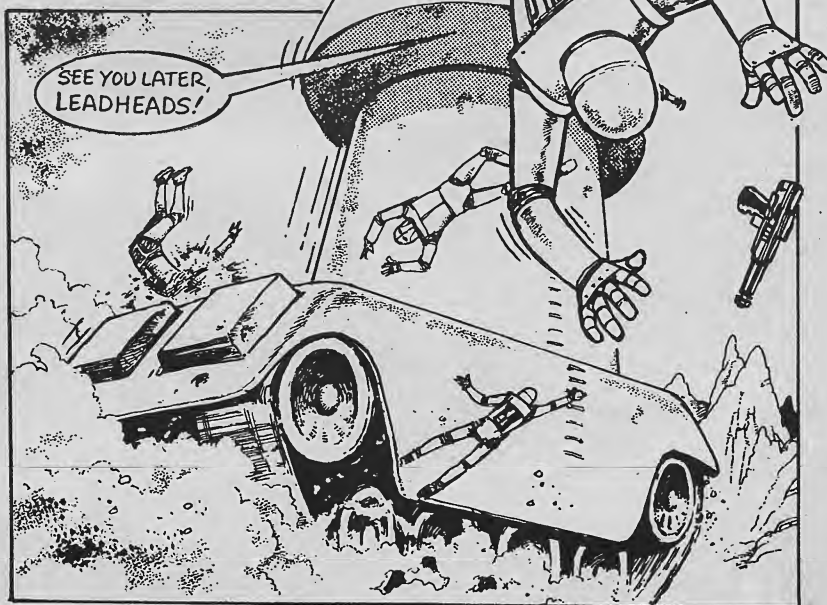
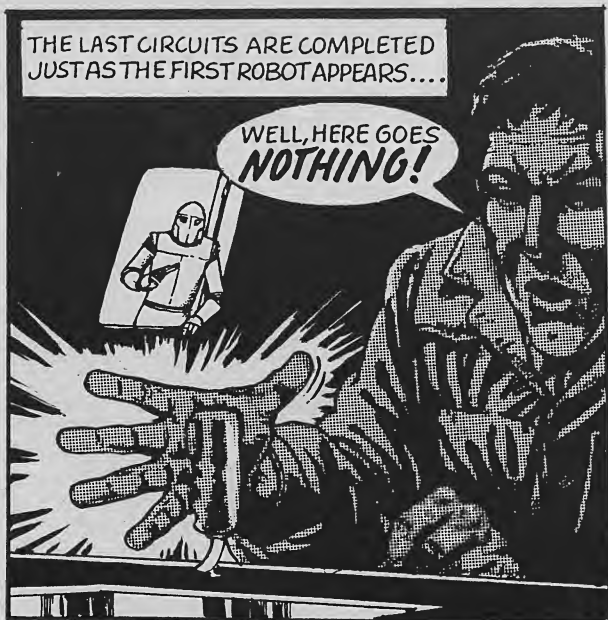
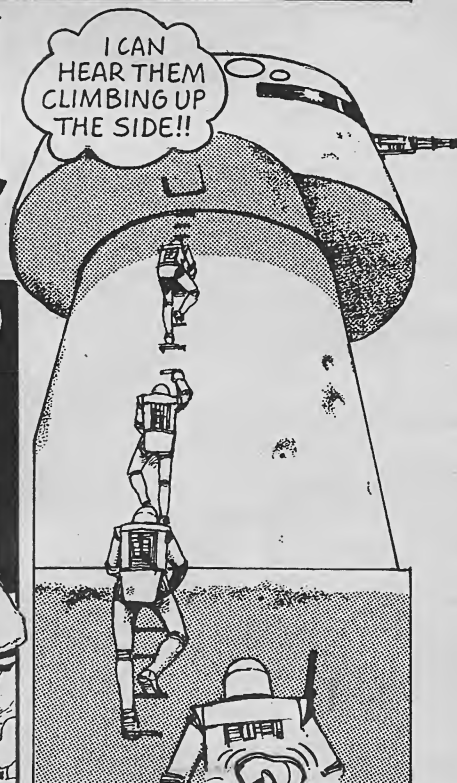
**WARGAMES**  
A LOAD RUNNER SPECIAL



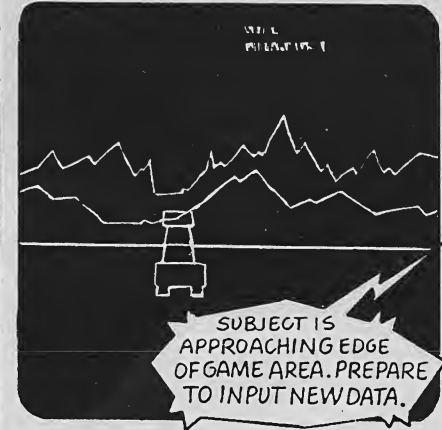




WITHOUT THINKING **LOAD RUNNER** REACHES FOR HIS PACK OF **MICRO-TOOLS** AND SWIFTLY DISMANTLES THE **CONTROL CONSOLE**, HIS FINGERS GUIDED BY INSTINCT ALONE...



LOAD RUNNER'S ESCAPE HAS NOT GONE UNNOTICED...



... IT'S UPHILL FROM NOW ON. I JUST HOPE THIS BUGGY CAN MAKE IT...

... IT'S ODD THAT I'M NOT BEING FOLLOWED. THIS HAS ALL BEEN TOO EASY!

AS HE NEARS THE SUMMIT, **LOAD RUNNER** REFLECTS ON THE DAY'S ASTONISHING EVENTS...

I DON'T KNOW WHO I AM OR WHERE I CAME FROM, BUT I DO KNOW I DON'T BELONG HERE, IN THIS CRAZY COMPUTER WORLD.

MADE IT! AND THAT SEEMS TO BE A CITY ON THE OTHER SIDE. MAYBE I CAN FIND HELP THERE...

I'M LITERALLY A PAWN IN THE HANDS OF SOME MYSTERIOUS CONTROLLER, AND UNTIL I DISCOVER WHO THAT IS, I GUESS I'M DESTINED TO REMAIN... A **LOAD RUNNER**!

SUDDENLY...

AAGHH!... I'VE HIT SOME KIND OF... **INVISIBLE BARRIER!**

**LOAD RUNNER** DESCENDS AND INVESTIGATES.

IT'S A WALL... ...IT'S PAINTED, JUST LIKE **STAGE SCENERY**. IT'S NOT REAL AT ALL!

THAT'S WHY NOBODY FOLLOWED ME... THEY KNEW ESCAPE WAS IMPOSSIBLE...

... I'M TIRED... FEELING **DIZZY**. MUST BE THE SHOCK... MUST REST... LITTLE...

THERE BEING NO FURTHER USE FOR IT, THE SCENERY DISSOLVES BACK INTO THE MEMORY OF THE COMPUTER...

RUB OUT **GRAPHICS**. LOAD NEW PROGRAM.

LOADING COMPLETED. PROGRAM NOW RUNNING.



# LOAD RUNNER

A NEW ENVIRONMENT IS CREATED...

CHANGING TO  
GRAPHICS MODE.



...WHAT'S  
HAPPENED?  
EVERYTHING'S  
CHANGED...



WELL,  
HERE WE GO  
AGAIN. ANOTHER  
TIME, ANOTHER  
PLACE AND, I  
SUSPECT...

...ANOTHER  
GAME!

GNAAR!

ANY MINUTE NOW  
THE **ROBOTS** MIGHT  
ARRIVE. I'D BETTER  
GET GOING... HANG  
ON... WHAT'S  
THAT?

A SHADOW FALLS ACROSS HIM.

SCRIPT:  
BILL SCOLDING

ARTWORK:  
PETER DENNIS

LETTERS:  
MICK HOLLINGWORTH

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MONSTER MAZE!



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published

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Send to: \_\_\_\_\_ (please print clearly)  
ECC PUBLICATIONS LIMITED  
196-200 Balls Pond Road  
London N1 4AQ



## No programs?

MAY I FIRST of all congratulate you on your great new computer comic *Load Runner*. It's fantastic, but I was surprised to find there were no computer programs at all.

E M Coleman, Dagenham.

I HAVE found your comic most satisfactory. There is one flaw, however, there are no computer programs. I would be very pleased if there were. Anyway, congratulations on a brilliant comic.

Niru Goeuk, aged 11, Upton, Chester.

• No sooner had I received your letters than I ordered my programmers to comply with your wishes. In this printout you will find the first of my games programs. Moreover, if readers would like to submit programs on cassette for any home computer, I will pay £10 for each program published. Include a stamped-addressed envelope if you would like them returned. Happy programming.

## DECODERS

AT LAST, the great moment has arrived. Today I open membership to the *Load Runner* Decoders. If you have shown great foresight and sense you will have collected the tokens from the three previous printouts which with today's entitles you to FREE membership.

If you have only just discovered the awesome power of *Load Runner*, membership will cost you £3.

All you have to do is send the tokens or a cheque to me, as well as TWO passport-size photographs, black and white or colour—with your name and address written clearly on the backs.

To ensure that my programmers and operators continue to input the

## Single error

I WOULD LIKE to congratulate you on such a superb magazine. The stories are ace, especially *Load Runner* and *The Invasion of the Arcadians*. I own a 16K ZX-81 and was very interested to hear about Chris Sievey and his computer record but no price was mentioned or what the games were.

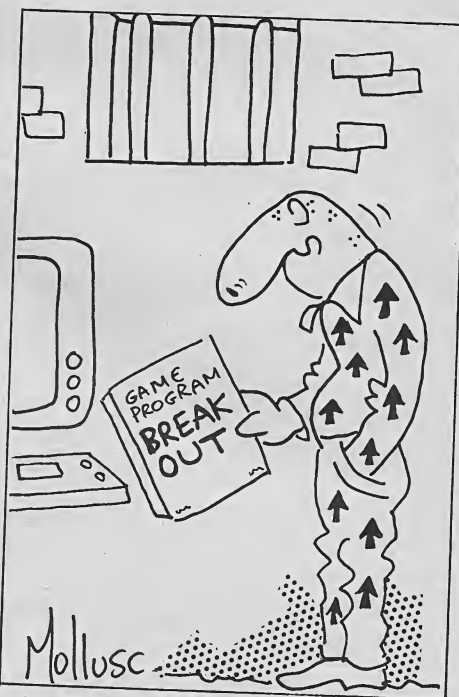
Andrew Skazynski, aged 11, Nuneaton.

• My operators have been disciplined for failing to provide such essential information. Chris Sievey's record costs about £1.15, though prices will vary from store to store. The programs are 1K and 16K versions of an arcade-type game, *Flying Train*.

## Superfantastic

I THINK your comic is fantastic. Superman couldn't do better. The story *Load Runner* is exciting and that goes for *Time Plan 9* and *Rom and Ram*. In fact they're all superfantastic. No Errors here.

Stuart Bogg, Peterborough.



I will pay £3 for each letter or joke printed.

Write to: The Controller,  
Load Runner,  
196-200 Balls Pond Road,  
London N1 4AQ

story programs and fact routines you want, fill in the form below and return it with your membership application. I will send you your personalised security pass which

## JOIN THE DECODERS TODAY

will contain your own Decoder number.

You will also receive a pamphlet explaining how to break the secret codes which will appear in future printouts. If you are a successful code-breaking Decoder, you will re-

ceive some super prizes.

Today, though, as I am in benevolent mood, I am giving away 40 tickets to the fantastic *Personal Computer World Show*, which is being held at the Barbican, London from September 28 to October 2.

The first 10 Decoders whose names I select will each receive four tickets to take their family or friends to what is Britain's best-known home computer show.

Don't delay! Join immediately! Write to me at my new super-modern installation base at 196-200 Balls Pond Road, London N1 4AQ.

The Controller



List below the story programs and fact routines that you like best in *Load Runner*.

1. ....
2. ....
3. ....

What do you dislike most in *Load Runner*?

Do you have a computer? YES/NO

Name ..... Age .....

Address .....





# TIME PLANS

**JULIUS CAESAR** SUDDENLY MATERIALISED IN PAUL'S BEDROOM. WAS THIS ANYTHING TO DO WITH THE MYSTERIOUS 'TIME PLANS' PRODUCED BY PAUL'S HOME COMPUTER? WHILE PAUL AND HIS FRIENDS KAREN AND DUNCAN TRIED TO SOLVE THE MYSTERY, **CAESAR** DECIDED TO EXPLORE THIS STRANGE NEW WORLD...



DUNCAN, YOU CHECK THE ROAD, I'LL TAKE THE BACK GARDEN.

I'LL LOOK IN THE HOUSE.



HANG ON, YOU NEEDN'T BOTHER!



THERE HE IS.

TYPICAL,

SCRIPT- FRANK HOPKINSON  
PHOTOS- HENRY ARDEN  
LETTERS- STEVE CRADDOCK



WHAT DO YOU CALL THIS?

ER... THAT'S BUGS BUNNY.

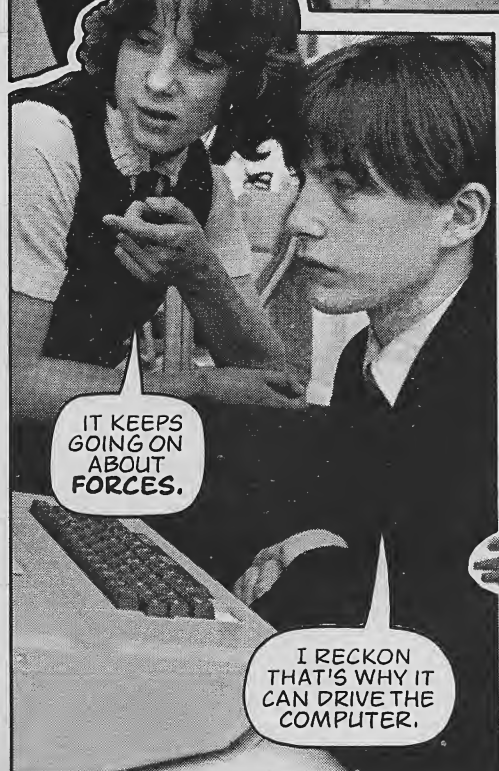




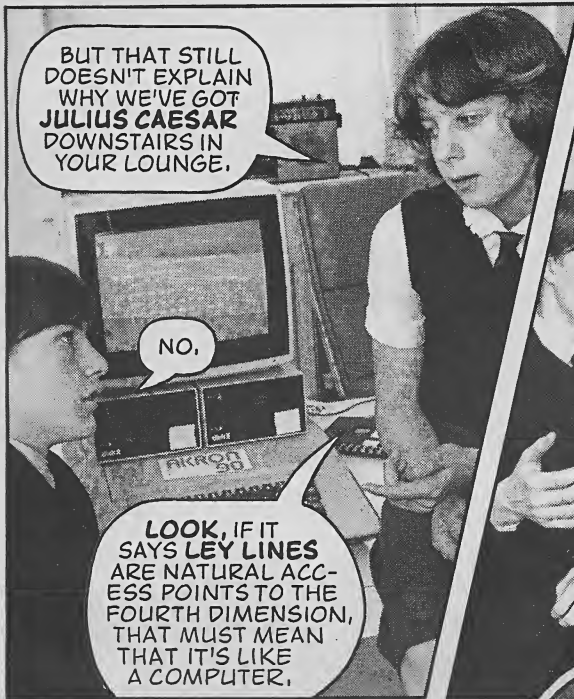
01 Position : 1

#### THE FOURTH DIMENSION

LEY LINES ARE NATURAL ACCESS POINTS TO THE FOURTH DIMENSION. WHERE THE FORCE IS STRONGEST, THE ABILITY TO REACH BACKWARDS OR FORWARDS IN TIME IS GREATEST.



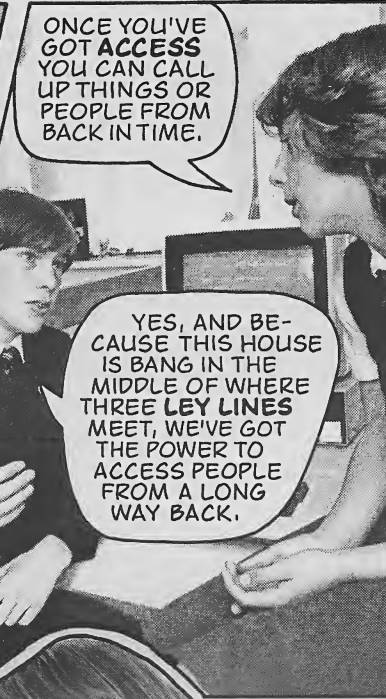




BUT THAT STILL DOESN'T EXPLAIN WHY WE'VE GOT JULIUS CAESAR DOWNSTAIRS IN YOUR LOUNGE.

NO.

LOOK, IF IT SAYS LEY LINES ARE NATURAL ACCESS POINTS TO THE FOURTH DIMENSION, THAT MUST MEAN THAT IT'S LIKE A COMPUTER.



ONCE YOU'VE GOT ACCESS YOU CAN CALL UP THINGS OR PEOPLE FROM BACK IN TIME.

YES, AND BECAUSE THIS HOUSE IS BANG IN THE MIDDLE OF WHERE THREE LEY LINES MEET, WE'VE GOT THE POWER TO ACCESS PEOPLE FROM A LONG WAY BACK.



OR A LONG WAY FORWARD.

BUT WE STILL DON'T KNOW HOW TO GET RID OF J.C.

BEFORE MY MUM WAKES UP, TOO! SHE WON'T STAY UNCONSCIOUS FOREVER.

SHE'LL MURDER ME IF SHE WAKES UP AND FINDS I'VE HAD STRANGERS IN THE HOUSE... SHE HATES ITALIANS, TOO!



THAT MUST BE WHERE THE TIME PLANS COME IN. ONE OF THEM MUST BE THE RIGHT PROGRAM TO SEND PEOPLE BACK.

YOU KNOW, YOU'RE VERY CLEVER FOR A GIRL.

THAT'S ALL RIGHT - YOU'RE NOT SO STUPID FOR A BOY.



BUT WHEN PAUL GOT DOWNSTAIRS AGAIN, HE FOUND THINGS WERE NOT ALL THEY SHOULD HAVE BEEN!

I'M SORRY, PAUL, BUT I COULDN'T HELP IT.

HELP WHAT?



HE'S FOUND OUT ABOUT HOW HE GETS MURDERED AT THE SENATE MEETING - I THINK HE'S TAKING IT VERY BADLY, TOO.

HOW DID HE FIND OUT?

HE WAS PLAYING ABOUT WITH THE REMOTE CONTROL AND SWITCHED OVER TO AN OPEN UNIVERSITY PROGRAMME ON THE ROMANS.

GUESS WHAT THEY WERE SHOWING.

HE'S DRUNK.



WOULDN'T YOU BE IF YOU FOUND OUT YOU WERE GOING TO GET MURDERED BY ONE OF YOUR BEST FRIENDS - 2,000 YEARS AFTER IT HAPPENED.

I TOLD HIM THEY NAMED JULY AFTER HIM, BUT HE DIDN'T SEEM IMPRESSED.

WE'VE GOT TO GET HIM BACK UPSTAIRS AND OFF TO WHERE HE CAME FROM.







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# COMPETITION

## 25 Virgin Games cassettes to be won

IN THIS PRINTOUT I am giving away 25 thrilling Virgin Games cassettes, available in the shops only recently and retailing at £7.95 each. The games run on the Spectrum, BBC or Vic-20 computers, and each cassette features its individual music track by Steve Hillage. There are eight games in all:-

**SPACE ADVENTURE:** Destroy the androids and collect the precious power crystals (BBC B).

**GOLF:** Challenge your friends to 18 holes (16K and 48K Spectrum).

**MISSION MERCURY:** Rescue the marooned scientists from the Mercury space station (unexpanded Vic-20).

**YOMP:** Guide your platoon across enemy highways and closely-guarded minefields (16K and 48K Spectrum).

**LANDFALL:** Land your spaceship at the Space Agency on Mars to refuel (BBC B).

**SHEEPWALK:** Round up the stray sheep with your trusty sheep-dog Rex (48K Spectrum).

**STARFIRE:** Navigate the galaxy and wipe out the alien starships (48K Spectrum).

**BUG BOMB:** Kill the bugs which inhabit the electronic grid (BBC B).

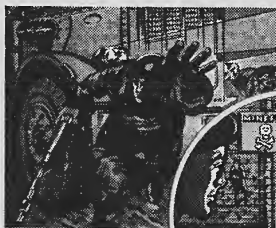
### HOW TO ENTER:

Below are some of the illustrations from the Virgin Games cassettes. All you have to do is decide which game each illustration depicts. For example, if you think picture A illustrates the game SHEEPWALK, write the title in the space provided.

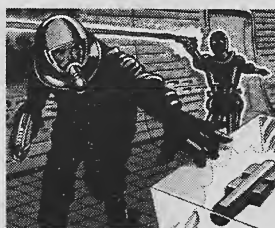
The winners will each receive one cassette game of their choice from the 8 games available, and will be decided on the basis of the first 25 correct entries opened. My decision will be final and employees of ECC Publications and Virgin Games are ineligible.

Send your entries to Virgin Games Competition, Load Runner, 196-200 Balls Pond Road, London N1 4AQ to arrive not later than Friday August 19.

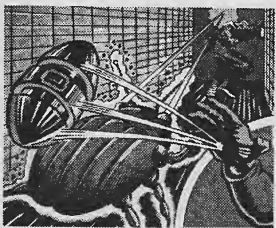
### The Controller



A .....



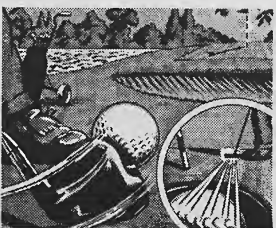
B .....



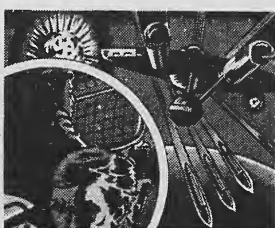
C .....



D .....



E .....



F .....

The cassette I would choose is .....

Name .....

Address .....

Age ..... Tel No .....

# KEY INTO A LOAD RUNNER SPECIAL OFFER



To commemorate the inauguration of **Load Runner**, the controller has authorised a special **FULL COLOUR** print-out of the cover of Program 1. The print-out is a massive **840mm. by 594mm.** and will do justice to the wall of any computer installation . . . even if there is a bed in there as well!

The giant print-out, on extra strong paper, is a tremendous bargain at **£1.95 + 55p** postage and packing.

Simply fill in the form and mail it to **Load Runner, 196-200 Balls Pond Road, London N1 4AQ.**

Allow 28 days for delivery.

Please mail me..... giant Load Runner print-outs.

I enclose cheque/postal order for .....

Name .....

Address .....



OUT-OF-THIS-WORLD OFFER..

# 50

# GAMES

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BARREL JUMP  
CANNONBALL BATTLE  
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ADDRESS \_\_\_\_\_  
PARENT/GUARDIAN SIGNATURE \_\_\_\_\_

LR4.8.83

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In recent issues we have shown how to use your Sinclair for controlling your central heating . . . improving the graphics . . . build a printer interface . . . and many more ideas that tax your ability and ingenuity.

**Sinclair Projects** is published every two months as a glossy, instruction-packed magazine that gives you all the encouragement you need to exercise your talent and take a serious look at what your Sinclair can do for you.

Each issue can contain as many as FIVE step-by-step projects — yet it's yours for JUST 95p. So if you want a break from playing games, make sure you order YOUR **Sinclair Projects** from your newsagent today — or fill in the form below and we will send it direct to you, six times per year.

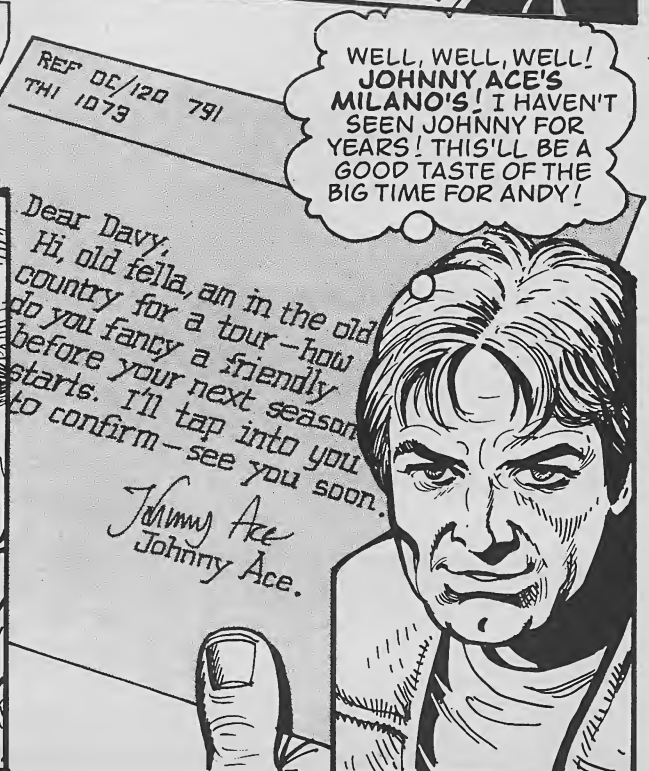
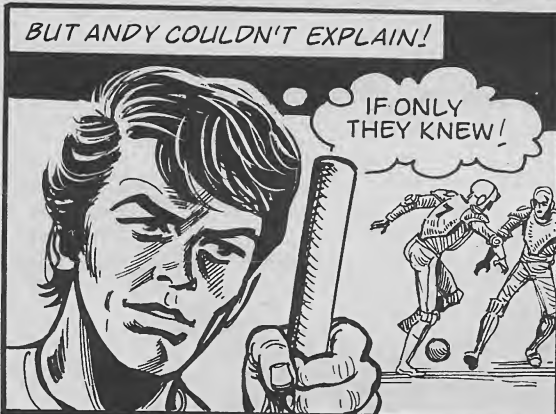
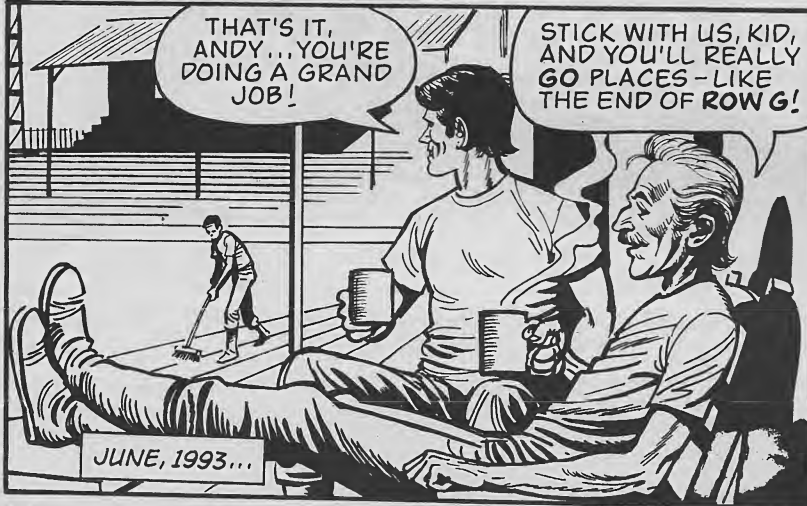
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# Andy Royd-the DOMINATORS

THE GROUNDSMAN AT DAVY'S DOMINATORS F.C. HAD A SECRET- HIS BIO-MECHANICAL LIMBS, WHICH ENABLED HIM TO PLAY FOOTBALL, DISGUISED AS A ROBOPLAYER...

## Rogue star!





DAVY CALLS  
IN HIS  
"GROUNDS-  
MAN"!

ACE'S  
MILANO'S!

... SO I'LL SEE YOU  
TONIGHT, AND WE'LL  
TEST OUT THE NEW  
PROGRAM.

SO, WHEN THE REST  
OF THE STAFF WENT  
HOME...

oooo  
oooo

ANDY TOOK TO THE FIELD...

...THE ONLY **HUMAN BRAIN**  
IN A TEAM OF ROBOTS!



DAVY'S VOICE CAME THROUGH  
ON THE MASK'S RADIO.

SCRIPT- CHRIS WINCH  
ART- JOHN STOKES  
LETTERS- S. CRADDOCK

RIGHT, DAVY...  
I'LL SHOW YOU  
HOW THE **REAL**  
TEAMS PLAY!



OK, ANDY,  
I RECKON WE'RE  
AS READY AS  
WE'LL EVER BE!

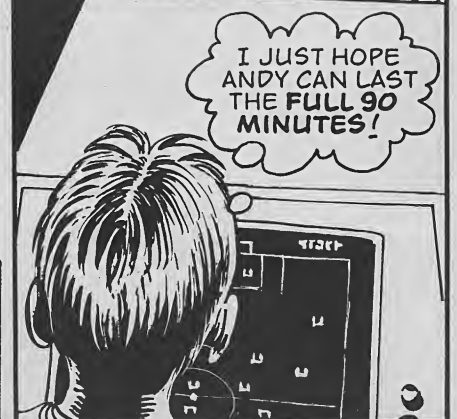
LATER THAT  
WEEK...

HELLO, JOHNNY,  
I HAVEN'T SEEN YOU  
SINCE WE WERE IN THE  
COLLEGE TEAM  
TOGETHER!

HI, DAVY! I'VE MOVED  
INTO BETTER THINGS  
SINCE THEN. THE ITAL-  
IANS CERTAINLY KNOW  
HOW TO LOOK AFTER  
THEIR MANAGERS!



I JUST HOPE  
ANDY CAN LAST  
THE FULL 90  
MINUTES!





UNTIL THE SECOND HALF, ALL GOES WELL FOR THE DOMS...

NIL ALL! WHO'D HAVE BELIEVED THE DOMS COULD HAVE KEPT OUT ACE'S MILANO'S?!

BUT JOHNNY ACE HAD PICKED UP SOME TRICKS ALONG THE WAY...

WATCH IT, ANDY!

AND THE FRUSTRATION FINALLY GETS TOO MUCH!

OOF!

I SUPPOSE YOU CAN GET AWAY WITH THAT IN ITALY!

ANDY STILL HASN'T GOT UP!

IF YOUR MACHINE'S DOWN, I'LL BUY YOU ANOTHER ROBOPLAYER. IT'S THE USUAL CUSTOM!

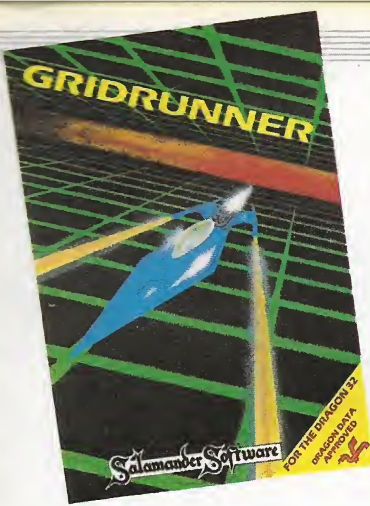
BUT NO-ONE CAN BUY ANOTHER ANDY!

GET UP, ANDY! GET UP!

I'M WINDED! I CAN'T MOVE!

NEXT PRINTOUT - IS SPORT TOO TOUGH EVEN FOR ANDY?





## Dicing with death on the grids

**G**RIDRUNNER is definitely a game for those who have the knack of all-round vision and a thirst for coping with hectic on-screen action. It runs on a Dragon 32. The game involves you, through your ship Gridrunner, in dealing with waves of aliens. It is not a traditional let-us-kill-the-invaders game, though. The beasts move round a grid and take the form of Gridsearch Squads. You must zap them with your gun before they get you. The squads drop from level to level as and when they come across an object in their path.

Initially the game seems confusing but that could be due to the indistinct graphics characters. The unresponsive Dragon joystick does not help, either. Costing £7.95, Gridrunner is produced by Salamander Software.

Fun 5; addictive 5; graphics 5.

## Beware of the deadly bugs

**B**EWARE, there's a bug about and he is after you. He is one of the many bugs in Bug Bomb, which is produced by Virgin Games for the 32K BBC Model B. They chase round a block of electric grids very quickly. You must either dodge their path tactically or kill them with your special energy blasts. A word of warning; if you miss the bug the blast remains active and it could bounce back and hit everything in sight.

Graphics and sound usage are good, as they should be on the BBC Micro, and your score is kept, together with a tally of lives left, at the top of the screen.

Bug Bomb is worth looking at, as are the other games in the recently-launched Virgin range. It costs £7.95.

Fun 7; addictive 6; graphics 7.

## Journey to the underworld

**B**ELIEVE IT or not, spiders, deadly piranha fish and an evil shrouded monk all have something in common. It's Styx. This strange combination makes up the elements of one of the newest software releases from Bug Byte and it proves to be an addictive game with a difference.

Using five keys, the object is to manoeuvre a small man through three stages of play.

In the first part you have to guide the man through a maze. You are destroying and escaping from lethal spiders which are laid by a mother spider hovering in the top right-hand corner of the maze.

Once past the spiders you leave through a door and dive into the piranha-filled river Styx. The deadly piranhas can move at speed. Dodge or kill them and you are through another door, but watch the weeds. The final phase is difficult. You encounter the Spirits of the Dead and they move in Over-drive. Kill them with your laser gun and then attack the Dark One.

The controls are reasonably situated so you will not need to have 20 fingers to play it. Graphics incorporated in Styx are imaginative and well-defined. All in all, a game on which it is worth spending your pocket money. Styx runs on a 16K or 48K Sinclair Spectrum and costs £5.95.

10-10 ratings: Fun 7; addiction 7; graphics 9.



## Tansoft takes off

**L**EARNING TO FLY on an Oric can bring you to a crashing halt in seconds—that is if you get your aircraft off the ground in the Tansoft Flight game, price £21.95. You take the controls of your Oric Airline DC48 and are challenged to fly the craft on a journey, completing take-off, flight and landing successfully.

As with all such games it takes a time to master the controls, although the manual is reasonably explanatory. Your best bet is to use the flight deck instruments to the full; in this game they are represented as digital readouts. Watch your fuel gauge during flight because it has a time limit.

It is advisable to study the game before you begin to play it. There is nothing more frustrating than constantly crashing the aircraft. Flight runs on the 48K Oric 1.

Fun 7; addictive 7; graphics 6.

## Arcade addiction with Qix

**Q**IX is a four-pronged, multi-coloured spark and you have to capture it. Using your marker to lay a trail the idea is to box in the Qix, preventing it darting around the screen. When you have drawn a box that area is shaded and your score is increased by the factor of the screen area you have captured. The first phase finishes when you have shaded-in 75 percent of the screen. The more you shade the smaller area the Qix has in which to move around.

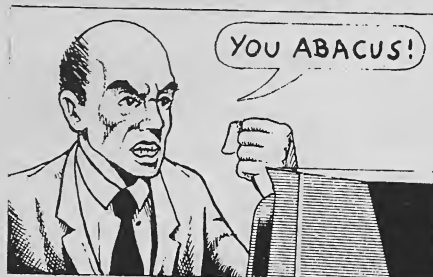
Originally an arcade game, it is one which requires the utmost concentration, manual dexterity and strategic skills. Except for the graphics it is more or less faithful to the original game. Qix is produced by Atari and it runs on both the Atari 400 and 800. It costs £29.95.

Fun 6; addictive 6; graphics 5.





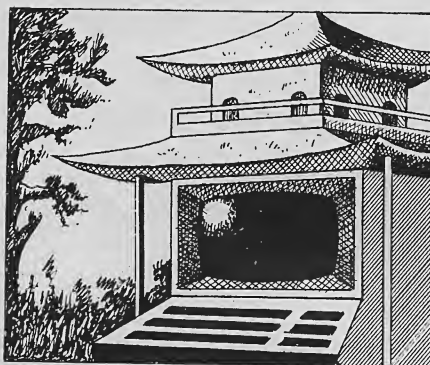
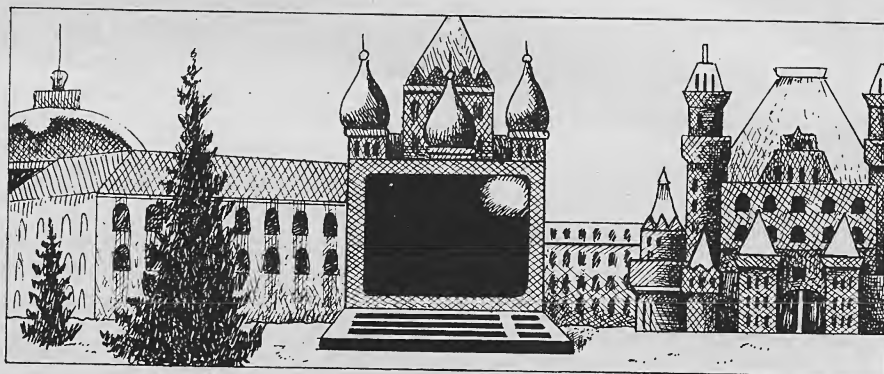
## A computer by any other name



THE NAMING of computers has always provided designers with an outlet for ingenuity. The earliest machines comprised mostly the first letters of a description, like ENIAC, the Electronic Numerical Integrator and Automatic Calculator. Most ended in -AC—EDVAC, EDSAC, UNIVAC, and so on. LEO—Lyons Electronic Office was an exception. Later the initials of manufacturers and a number became popular, the IBM 401, for example. We do not know what was the designers' description of an early Australian machine, ABACUS but the users called it A BI----- Awful Computer Useless to Scientists.

## Some revolutionary computers

THE FIRST COMPUTER in the Soviet Union was built in the laboratories of the Ministry of Electric Power Stations in Kiev by engineer Lebedev in the early 1950s. Development moved to Moscow, where a more powerful machine, the BESM, was in operation by 1953, being used for scientific research. Today the Institute for Mathematical Machines in Moscow has many computers of much greater power, of course.



THE CHINESE exhibited a locally-made computer at the Leipzig Fair in the 1960s. Even then they were somewhat behind technology in the West, most of it having reached them via the Russians. Progress in computing ceased during the Cultural Revolution, when many of their computer scientists were sent to work on remote farms and others were required to turn their laboratories into factories.

It was not until after Mao's death that university groups were re-assembled and work began again in laboratories, universities and at the Academy of Science. Some Chinese returned from working in the West and some Western technology was imported, particularly airliners. The most powerful computer in China in 1980 was copied from computing equipment supplied with a Boeing 707 aircraft from the U.S.

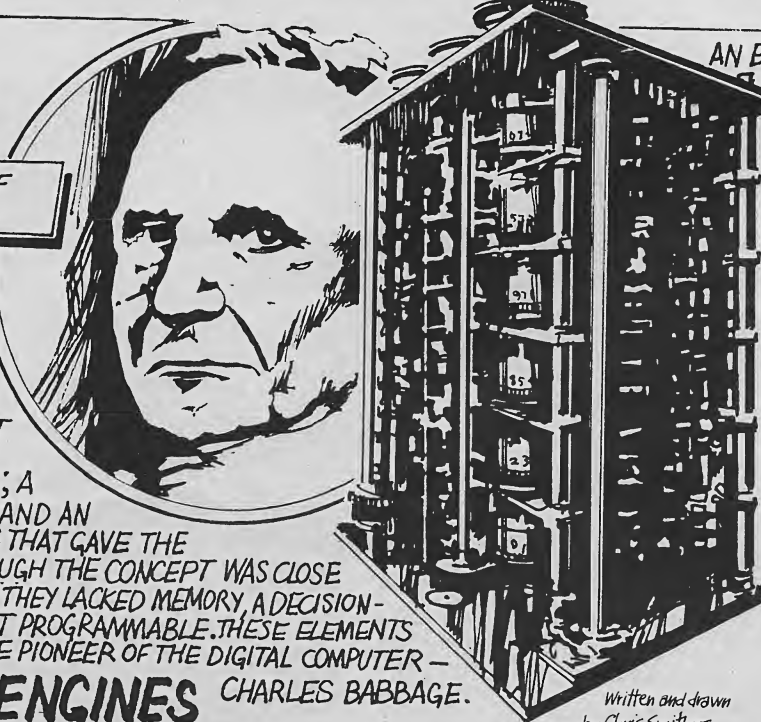
## The Computer Story

A HISTORY OF COMPUTERS  
PART THREE

THE CALCULATING MACHINES OF THE 18TH CENTURY HAD THREE MAIN FEATURES: AN INPUT DEVICE—THE DIALS FOR ENTERING THE NUMBERS; A CALCULATING MECHANISM; AND AN OUTPUT DEVICE—THE DIALS THAT GAVE THE FINAL CALCULATION. ALTHOUGH THE CONCEPT WAS CLOSE TO A MODERN COMPUTER, THEY LACKED MEMORY, A DECISION-MAKING UNIT, AND WERE NOT PROGRAMMABLE. THESE ELEMENTS WERE INTRODUCED BY THE PIONEER OF THE DIGITAL COMPUTER —

### COMPUTING ENGINES

CHARLES BABBAGE.



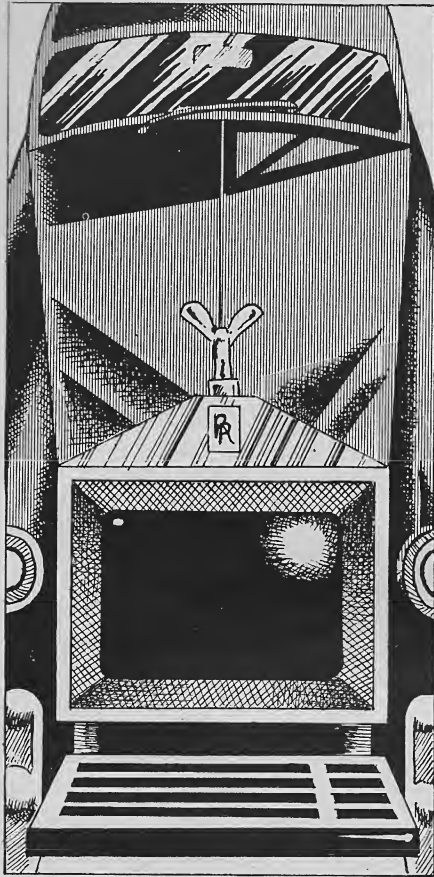
AN ENGLISH GENIUS CREDITED WITH AN ASTONISHING RANGE OF IDEAS AND INVENTIONS, BABBAGE WAS BORN IN 1791. THE WORLD WAS BECOMING MORE COMPLEX, AND MANY PEOPLE WERE EMPLOYED DOING ROUTINE CALCULATIONS, CHECKING TABLES AND COMPILING DATA. AS A MATHEMATICIAN, BABBAGE WAS ACUTELY AWARE OF THE LARGE NUMBER OF ERRORS IN LOG TABLES, AND DESIGNED HIS "DIFFERENCE ENGINE" TO COMPILE THEM AUTOMATICALLY.

HE PERSUADED THE GOVERNMENT TO GIVE HIM MONEY TO HELP BUILD HIS ENGINE — BUT WITH THE TECHNOLOGY OF THE TIME IT PROVED IMPOSSIBLE TO MAKE THE MACHINE ACCURATE ENOUGH TO WORK RELIABLY.

IN 1833 BABBAGE STARTED WORK ON A GRANDER MACHINE, THE "ANALYTICAL ENGINE".

Written and drawn  
by Chris Smithers

## If . . .



*IF THE CAR industry had developed like the computer business in the last 30 years, a Rolls Royce would now cost £1.50 and would run for three million miles on a gallon of petrol. What a pity there is no comparison.*

● **Buzzwords** are the jargon of the computer world and can be very confusing. Below, *Load Runner* continues its glossary of computing terms. Get buzzing.

● **Branch.** The most important operation a computer can do. When the computer reads a branch instruction in a program it will go to another part of that program. The branch can also be made conditional, so that the computer will jump to another part of the program only if a certain condition is fulfilled.

● **Buffer.** A place between one part of a computer and another. The printer buffer is where characters are stored in the computer before they are typed on to the printer paper.

● **Bug.** An error in a program which prevents it running or which produces incorrect results.

● **Bus.** A channel along which data travels from one part of a computer to another.

● **Buzzwords.** A term which is used to mean something regarding computers but could also be used to refer to something different in another area of knowledge. For instance, Input could refer to a Basic program statement, or entering information into a computer. It could, however, refer to an idea put into a discussion. Buzzword can mean different things to different people.

● **Byte.** A collection of eight ones or

zeros, which are bits. Computer memory is measured in bytes and 1,024 bytes make up one kilobyte (K).

● **Cartridge.** A form of permanent storage which can hold computer programs. Cartridges can be inserted into a computer and the program is available immediately the computer is turned on.

● **Centronics.** A method of connecting equipment, such as printers, to a computer. The Centronics is an interface which makes the signals between computer and printer standard, so that both understand each other.

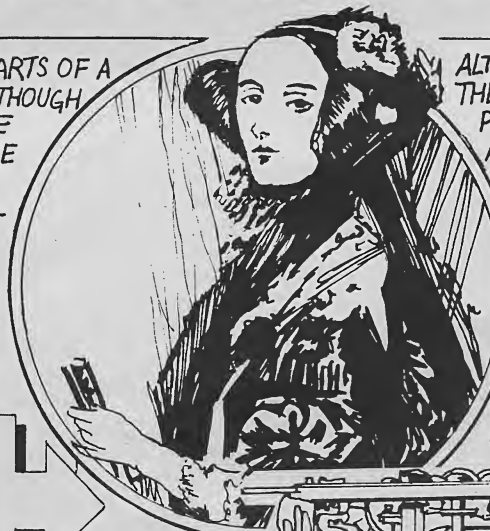
● **Character Set.** The alphabetic and numeric characters, such as a,b,c and 1,2,3, which the computer can use in displays on the screen and on the printer.

● **Chip.** A piece of silicon which holds all the components which make up a microprocessor in a computer.

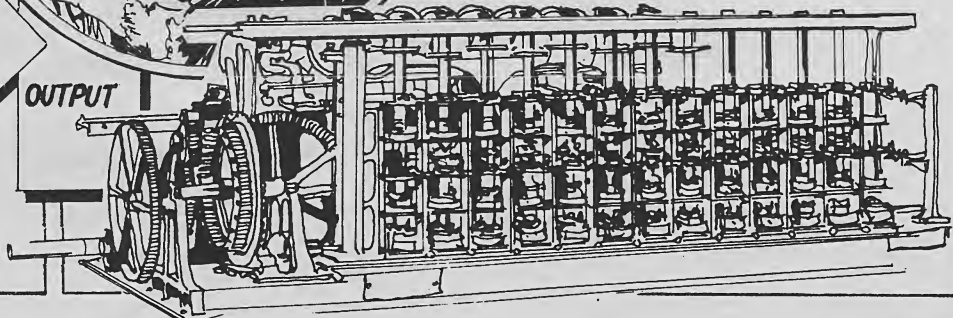
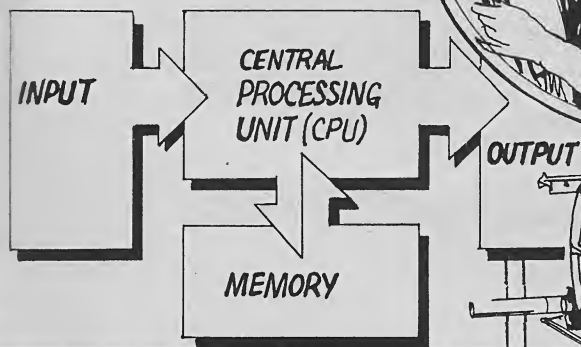
● **Circuit.** A part of the electronic structure of the computer. The circuits are formed in both the chips and connections on the printed circuit board, which usually is located inside the keyboard casing of a microcomputer.

WHICH HAD ALL THE ESSENTIAL PARTS OF A MODERN COMPUTER (BELOW). ALTHOUGH IT WAS NEVER BUILT, WE KNOW THE DETAILS OF IT BECAUSE BABBAGE WAS BEFRIENDED BY ADA AUGUSTA, COUNTESS OF LOVELACE—MATHEMATICIAN AND DAUGHTER OF THE POET LORD BYRON.

SHE MADE NOTES ABOUT IT, AND WROTE SEVERAL PROGRAMS—SO BECOMING THE WORLD'S FIRST COMPUTER PROGRAMMER.

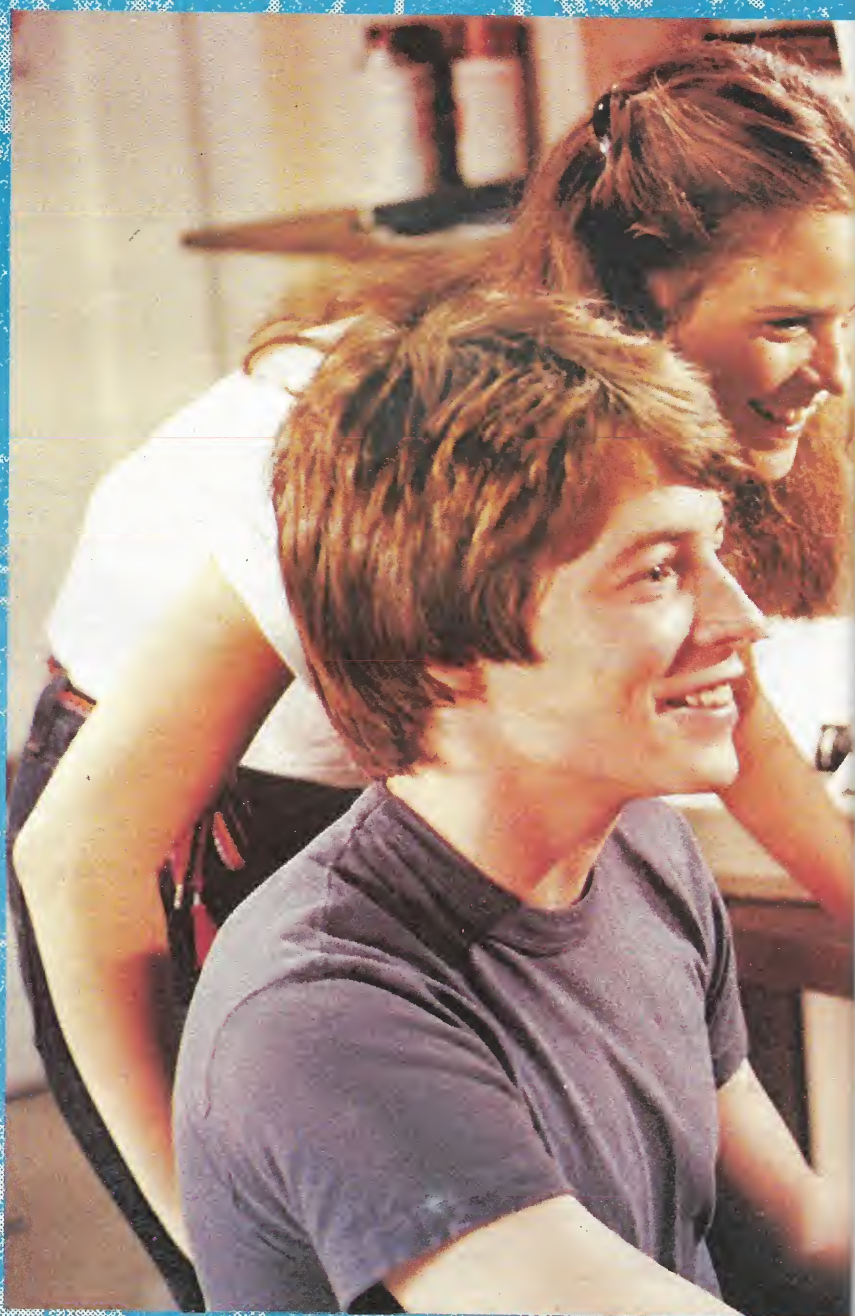


ALTHOUGH BABBAGE DIED A DISAPPOINTED MAN, THERE WAS NOTHING WRONG WITH THE PRINCIPLE OF HIS MACHINES. TECHNOLOGY ADVANCED, AND IN 1855 A SWEDISH ENGINEER WHO'D READ ACCOUNTS OF BABBAGE'S DIFFERENCE ENGINE BUILT HIS OWN VERSION. IT WORKED SO WELL THAT THE BRITISH GOVERNMENT BOUGHT ONE OF GEORG SCHEUTZ'S MACHINES (BELOW)—ABOUT THE SAME TIME AS BABBAGE'S DIFFERENCE ENGINE WAS BEING TUCKED AWAY IN A CORNER AT THE GREAT INDUSTRIAL EXHIBITION IN LONDON.





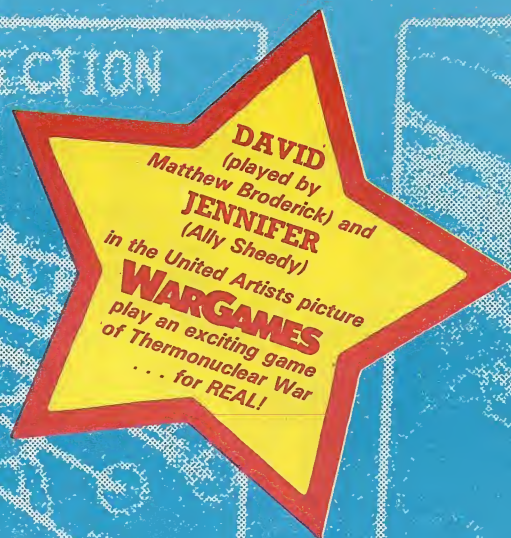
**LOAD  
STARS**



# WARC



SUB-LAUNCH DETECTION



# GAMES



*Shut down all systems! It's . . .*

# COUNT DOWN TO CHAOS

*by Philip Steele*

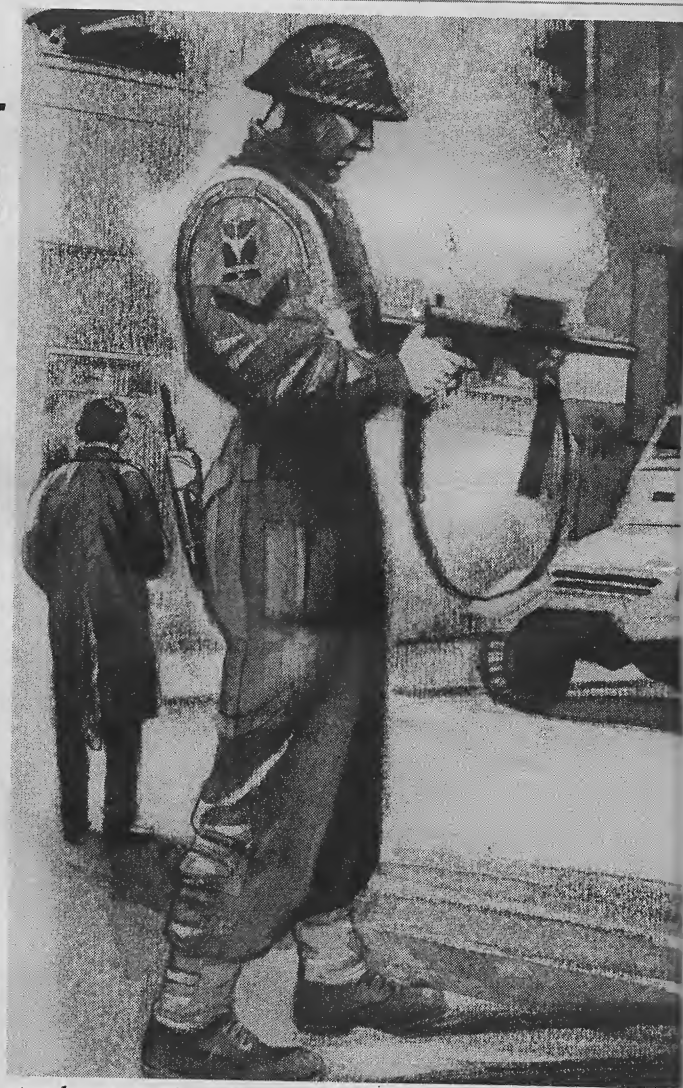
*Can you imagine a world without the microchip? Well, it existed not so long ago. In the meantime we have come to depend on the world of microelectronics for our survival, as Joe and Ellie find quickly enough on the day systems failures plunge the world into chaos. All kinds of horrors loom large, including the threat of nuclear war. Joe and Ellie's dad is trapped by a robot machine at the car factory where he works. Can Joe and Ellie set him free?*

For a moment Joe and Ellie stood rooted to the spot. Sparks showered into the darkness, lighting their faces in stark horror. Then Ellie started running.

"Joe, I'll try to find the control and abort the program. You look for the lights". Their running footsteps echoed through the vast building.

Ellie headed for a glass compartment at the end of the shop floor. Good grief—the door was locked. She peered around desperately and saw a broom propped in the corner. Standing back, she broke the glass panels of the control room with the broom handle. Crash! Smash! Crawling through the jagged hole she tore her blouse but didn't notice the rip, or the blood running down her knee. The monitor screens were blank. Ahead lay the control panel, all channels switched to off except for one flashing light. Only when that light was out would their dad be safe.

Ellie's eyes quickly took in the keyboard and a well-thumbed operator's manual lying on a stool. She checked the abort sequence rapidly and keyed it in. Nothing happened. She tried again, and again. Beads of sweat



stood out on her forehead. Ellie was checking the sequence for the fourth time when she realised she was wasting her time; the system must already have failed, like all the others.

She wept at her stupidity and lunged for the power cable. She ripped the plug from the socket and the flashing light went out. At the same time all the lights in the building came on, bathing the shop floor in a reassuring glow. Ellie raced back to find the sparking had already stopped; Joe was easing their dad from behind the metal arm of the robot.

"Well done!"

"He's really whacked but I think he'll be OK!"

"Joe, Ellie, thanks. What the hell's going on?" gasped their dad.

Soon he was sipping a cup of hot, sweet tea, while Joe and Ellie told him how the world had almost stopped.

The general assembly of the United Nations Organisation had been in constant session for 48 hours. New York City was sweltering in a blaze of heat. From the crowded cafés of Greenwich Village to the tenement blocks of Harlem, the city lay throbbing in a dust haze. The banking corporations and the offices in Wall Street had closed their doors. Bands of looters roamed the shopping districts and with the police unable to cope, thieves terrorised anyone who was rash enough to venture into Central Park.

On the floor of the UN, delegates looked weary and confused. There were no more satellite links; communications with the rest of the world had broken down. The threat of nuclear war seemed to have passed but now all sides were accusing each other of sabotage. The Americans blamed the Soviets, the Soviets blamed the Chinese,



"Halt! Freeze right there!"

the Chinese blamed the Indians, the Indians blamed Pakistan. Suddenly there was a hoarse cry from the public gallery:

"Silence, children of Babel. Hear the words of the Lord!" A ragged figure with a white beard was stabbing the air with a bony finger. He had no need of a microphone; his voice rolled like thunder. "Leave your petty squabbling. The end of the world is nigh. There are strange signs in the sky. Satan is riding through the streets of New York City".

"Clear the gallery; clear the gallery".

"The computers are the engines of Beelzebub. We have sinned and we reap our reward". The old man was led out by security guards, shouting and kicking.

"Why can't they keep madmen out of this chamber?" said the French delegate to his neighbour.

"He has a point, you know", replied the German. "If we don't stop arguing and find out why the computers have broken down, what chance is there for world peace?"

He rose to his feet. . .

**H**old on a sec while I take a breather". Joe and Ellie were supporting their dad, one on either side.

"OK, let's get back to your mother. Is she all right?"

"We left her with Winston. She'll be next door with them".

They left the factory and hurried back to the High Street. Windows were broken and cars were overturned. A building blazed out of control. They rounded the corner—and met the army. The street was barricaded with trucks and armoured cars.

"Halt! Freeze right there!" An armed soldier moved

forward and frisked their dad. "And the kids! Check the kids!" yelled a captain.

"What's all this?" asked dad.

"Curfew. Don't you know anything?"

"I was trapped down at the works. I must get back to my missus".

"Sorry, mate. No crossing into Sector 3 tonight. Come back tomorrow".

"But—the children—".

"It's all right, sergeant, these people can come with me". They all swung round to see a pale figure in a crumpled black suit emerge from the shadows. The face was lined and framed by a shock of white hair. The old gent flashed an identity card at the soldier. The captain went to check.

"Very well, sir. Most irregular, but if you say so. . ."

"Come with me, my friends". The old gent turned to the puzzled group. "Jump in!" He opened the door of a dilapidated Bentley. "Now where to?" They pulled through the army road block and the soldier saluted.

"We live in Crispin Park", said Joe. "33 Maldwyn Road".

"Who are you?" asked dad.

"I am Professor Lebo; Johann Lebo, the astronomer, at your service, for as you see I have a government pass. I am on my way to the observatory at Snelling—down by the river, you know. It seems that it is in danger of being flooded. Well, like everything else electronically-controlled, the flood barrier seems to be out of commission. We have to rescue our records and take them to the new observatory at Linden Castle, in Kent. The flood alert means that the whole of Sector 5 is being evacuated, hence the curfew, the road blocks and so on. . .

"Floods, too. I reckon that comet did bring us bad luck". said dad.

"I am a man of science". The professor gave dad a

---

**"If we don't find out  
why the computers have  
broken down, what chance  
is there for world peace?"**

---

hard look. "A comet is a comet. A flood is a flood; and a fool is a fool".

"OK", said dad. "Keep your hair on. Here, we're home. Thanks for the lift".

Mum ran out at the sound of the car. Behind her were the next-door neighbours, Winston and Sue.

"Jack, oh Jack". She hugged him as he climbed out of the car. "Joe, Ellie, you should never have run off like that".

"They saved my life", said dad proudly. "Don't be too hard on them. This kind gentleman is Johann Lebo, the astronomer".

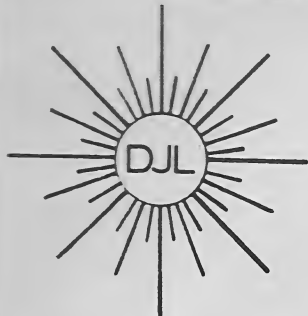
The professor nodded politely and his car rattled away into the night.

**E**LLIE and Joe lay in bed. "What a day! Let's try to solve this mystery ourselves" said Ellie. "I think the strangest part is yet to come. It's all so odd. I don't know why, but I get the feeling we haven't seen the last of that Professor Lebo. Joe—".

A snore came from the other side of the room. Joe was fast asleep.

CONTINUED IN NEXT PRINTOUT.





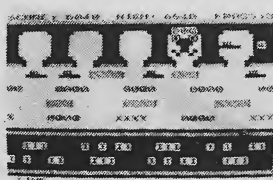
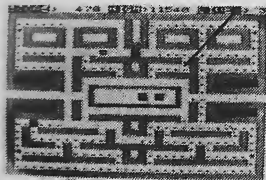
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# THE INVASION OF THE ARCADIANs

SCRIPT:  
LES COOKMAN

ARTWORK:  
JOHN STOKES

LETTERS:  
STEVE POTTER

A DANGEROUS NEW GAME CALLED **MIND WARP** HAS BEEN INSTALLED IN ARCADES EVERYWHERE. IT SEEMS TO **BRAINWASH** THE PLAYERS AND THEY BECOME '**DAZERS**'. THE ARRIVAL OF A STRANGER SAVES THREE YOUNGSTERS FROM THESE GANGS. NOW HE EXPLAINS WHY.

BECAUSE OF YOUR SPECIAL RESISTANCE TO **MIND WARP** YOU ARE THE ONLY ONES WHO CAN HELP ME DEFEAT THIS EVIL THAT HAS LANDED AMONGST YOU.



ANYWAY... WHAT'S IMPORTANT IS WHAT I HAVE TO TELL YOU. IT'S SO **INCREDIBLE** YOU WILL FIND IT HARD TO **BELIEVE**...



WHERE I COME FROM DOESN'T MATTER BUT MY NAME IS '**D**'.

DEAN?



NO NO—**D**!

D'YOU MEAN **DEE**?

NO—JUST **D**!

THESE MACHINES CALLED **MIND WARP** ARE A DEVICE FROM AN ALIEN PLANET WHO AIM, ONE DAY, TO **COLONISE** THE **EARTH**. THEY USE THE LOW **HOSA BRAIN PATTERNS** TO CONTROL THE HUMAN MIND...



AS THE STRANGE YOUTH EXPLAINS THE TERRIBLE TRUTH BEHIND THE **DREADED ARCADE GAME** OTHER EARS ARE LISTENING... AND COMMUNICATING TO OTHERS.

HE KNOWS TOO MUCH... THERE ARE OTHERS WITH HIM... I SHALL NEED ASSISTANCE ... **FAST**...

ONCE THESE MACHINES HAVE GAINED CONTROL OF YOUNG PEOPLE THEY CAN, IN MANY YEAR'S TIME, PLACE THEM IN HIGH RANKING POSITIONS IN **GOVERNMENT, LAW** AND **EDUCATION**. BY THEN THE **NORMS** WILL BE IN THE MINORITY AND RESISTANCE FROM THE FEW **SPECIALS** LIKE YOURSELVES WILL BE **POINTLESS**.





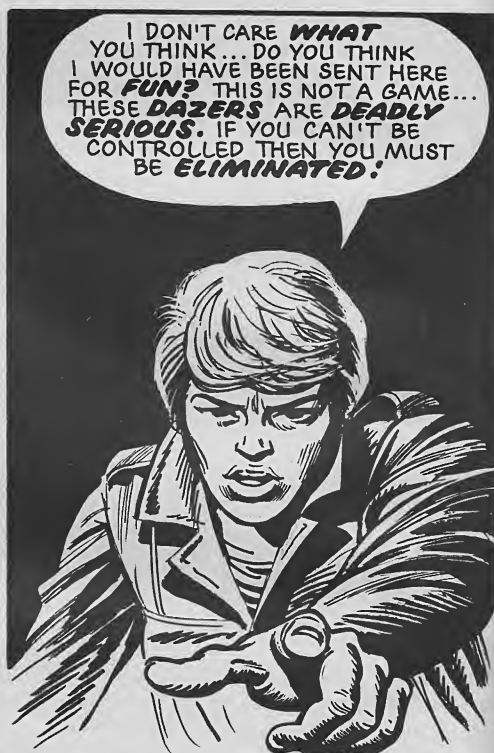


THE ALIENS BELIEVE THAT IF THEY CONTROL THE YOUTH OF THE WORLD **INVASION** IS ONLY A MATTER OF TIME. THEY KEEP THE NEW DAZERS UNDER CONTINUAL CONTROL THROUGH THESE **PERSONAL STEREOs**— EVENTUALLY THESE CAN BE DISPENSED WITH AND THE DAZER IS **IRREVERSABLY THEIRS!**



**ALIENS?**  
TAKING OVER THE EARTH? I THINK 'E IS THE ONE WHO'S OFF HIS HEAD!

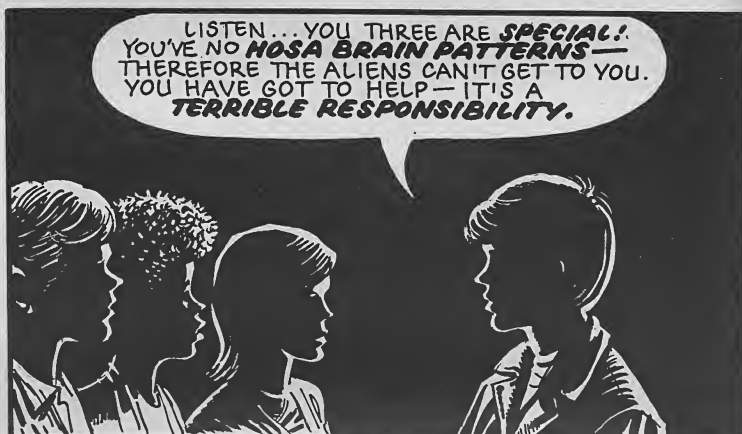
HE'S GOT TO BE **JOKING**— I KNOW THESE **DAZERS** ARE A **WEIRD BUNCH** BUT UNDER CONTROL FROM **OUTER SPACE?** I THINK...



I DON'T CARE **WHAT** YOU THINK... DO YOU THINK I WOULD HAVE BEEN SENT HERE FOR **FUN?** THIS IS NOT A GAME... THESE **DAZERS** ARE **DEADLY SERIOUS**. IF YOU CAN'T BE CONTROLLED THEN YOU MUST BE **ELIMINATED!**



LOOK... I'D LIKE TO HELP YOU MISTER, BUT MY MUM WOULD THROW A **FIT** IF SHE KNEW I WAS TALKING TO A NUT— I MEAN A STRANGER! SORRY...



LISTEN... YOU THREE ARE **SPECIAL!** YOU'VE NO **HOSA BRAIN PATTERNS**— THEREFORE THE ALIENS CAN'T GET TO YOU. YOU HAVE GOT TO HELP— IT'S A **TERRIBLE RESPONSIBILITY**.

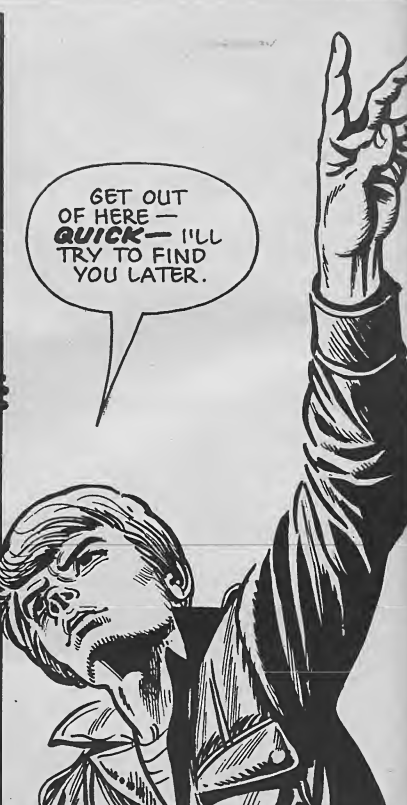


WELL— I DON'T KNOW ABOUT YOU LOT BUT I DON'T NEED ANY MORE AGGRAVATION FROM THOSE **DAZERS**... I INTEND TO KEEP OUT OF THEIR WAY FROM NOW ON... **WHOEVER THEY ARE!**



**BUT AT THAT MOMENT...**

I'M AFRAID IT'S A BIT LATE FOR THAT NOW... **YOU ALL KNOW TOO MUCH!**



GET OUT OF HERE — **QUICK**— I'LL TRY TO FIND YOU LATER.

QUICKLY... RUN... HIDE...  
THEY'RE COMING!



ONCE AGAIN THE STRANGER  
SHOWS HIS SPEED...



...AND POWER. THE  
DAZERS HESITATE...



...AND THE YOUTH CALLED  
D BEGINS TO VIBRATE...



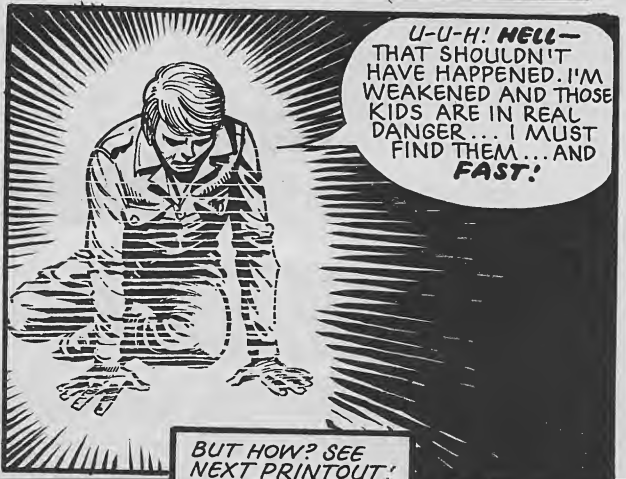
...AND VANISHES!



HE'S TRICKED US  
AGAIN - WE MUST  
GET HIM AND THOSE  
DAMN KIDS BEFORE  
THEY REGROUP. THEY  
COULD RUIN  
EVERYTHING!



U-U-H! HELL -  
THAT SHOULDN'T  
HAVE HAPPENED. I'M  
WEAKENED AND THOSE  
KIDS ARE IN REAL  
DANGER... I MUST  
FIND THEM... AND  
FAST!



BUT HOW? SEE  
NEXT PRINTOUT!



# The Challenge of the Decade! With NEW Games like **CONFLICT** and **GALAXY CONFLICT**

We're adding the latest and best to our catalogue every month from selected sources throughout the UK and North America — so there's a new challenge for you **every time** at prices you won't beat!

Remember — we specialise in programs for your Sinclair — whether you choose games, business, educational or household software. Many of our games cannot be bought by mail order from any other source. And many of our prices are the lowest you'll find **anywhere**. You'll want to make **sure** victory is yours with these new programs where **two can play**:

**CONFLICT** — Total war for two players, involving both the machinery (armies, missiles, warships) and finance (stock market, oil, piracy) of conflict.

To order quote the following references: — ZX81-16k: C-1; Spectrum-48k: C-2.

**GALAXY CONFLICT** — Raise the fleet of battle Eoncruisers then move from bridge to bridge taking full control and responsibility in this battle for the heavens — to prove yourself a born galactic ruler!

To order quote the following references: ZX81-16k: GC-1; Spectrum-48k: GC-2.

Each comes complete with game board, program, counters, markers, maps (**CONFLICT** only) plus full instructions and rules of war for the **unbeatable introductory price of £9.95!**

(N.B. When ordering be sure to specify the correct order number, dependent upon the type of machine — ZX81 or Spectrum — that you own.)

With our Special deal you can't go wrong:

- ★ **FREE** offer every time [this time it's a free blank C20 cassette with every two programs ordered]
- ★ A replacement guarantee if you're not entirely satisfied with the quality of your purchase — that's how confident we are!

All you have to do is look at our new HOT selection — then order quickly to benefit from the introductory prices of our new games of skill, intelligence and excitement (fast delivery is another of our specialities — so you could be using these new programs **SOON**)

## FREE BLANK C20 COMPUTER CASSETTE WITH EVERY TWO CASSETTES YOU ORDER!

Remember there's no limit to the number of free cassettes you receive if your order justifies them — so why not get together with friends or user group members and share the freebies?

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Order with complete confidence. If you are not entirely satisfied with the quality of your purchase — return it to us within 7 days and we will provide a replacement



**GREAT VALUE! TREMENDOUS SELECTION! PLUS A FREE OFFER EVERY TIME!**

Fill in the order form right away — we're guaranteeing fast delivery, quality and satisfaction (after all, we want you to come back for more!)

**The Software Workshop, Yew Tree, Selborne,  
Hants GU34 3JP**

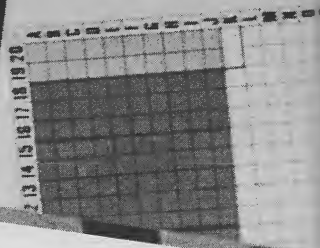
**GALAXY CONFLICT**  
(ZX81/Spectrum)

Exciting and Challenging Computer Game For Two Players

Use a fleet of battle Eoncruisers, then move from bridge to bridge taking full control and responsibility

**CONFLICT**  
(ZX81/Spectrum)

At last — an Exciting and Challenging Computer Game For Two Players



# Here's a whole NEW selection of the latest games, the best-value software for your ZX-81 or Spectrum.

## ZX81 Software

### 1-01 Stock Market

Buy and sell your way to millions! 16K RAM

£3.95

### 1-02 Football League

First division fun for the soccer enthusiast. 16K RAM

£3.95

### 1-03 Test Match

Match your wits alongside the superstars. 16K RAM

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### 1-11 Arcade Action

Overtaker/Missile Man/Space Fighter/Pilot/Greedy Gobbler/Extra Terrestrial. 1K

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### 1-12 Avenger

Avoid missiles and bombs to become the ruler. 16K RAM

£4.95

### 1-13 Protector

Defend your own ship from oncoming attackers. 16K RAM

£4.95

### 1-21 Football Manager

Manage your team through a hectic league season! 16K RAM

£5.95

### 2-14 Meteor Storm

Spectrum version of the ever-popular arcade game. 16K or 48K RAM

£4.95

### 2-15 Star Trek

Popular space program brought to life by excellent graphics. 48K RAM

£4.95

### 2-21 Frogger

Manoeuvre the frog across the road avoiding heavy traffic. 48K RAM

£5.95

### 2-22 Crazy Balloons

Guide the balloons round the maze without bursting. 48K RAM

£5.95

### 2-23 Arcadia

The expert's version of the popular 'Invaders' game. 16K or 48K RAM

£5.95

### 2-24 Golf

The finest of golf handicap games. 48K RAM

£5.95

### 2-25 Test Match

More exciting than the real thing! 48K RAM

£5.95

### 2-26 Derby Day

This favourite has to be a winner. 48K RAM

£5.95

### 2-27 Rescue

Rescue the Princess from marauding patrols. 48K RAM

£5.95

### 2-28 The Orb

Discover the Orb in the depths of the temple but watch the monsters. 48K RAM

£5.95

### 2-29 Jackpot

The harmless way to take on the one-armed bandit. 48K RAM

£5.95

### 2-31 Football Manager

See 1-21 under ZX81. 48K RAM

£6.95

## Spectrum Software

### 2-12 Avenger

(See 1-12 under ZX81). 48K RAM

£4.95

### 2-13 Sentinel

Guard your mother ship against alien attacks. 48K RAM

£4.95

**To: The Software Workshop, Yew Tree, Selborne, Hants GU34 3JP**

I wish to order the following programs. I understand that:

- \* I will receive a FREE blank cassette with every 2 programs ordered
- \* I can return products within seven days if not entirely satisfied and receive a replacement.

Ref No	Qty	Title	Price

Postage, packing and handling: add 45p for the first cassette, and 25p for each additional cassette. Non-UK orders add extra 50%

**Total**

I enclose a cheque/postal order for \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

SU7



**(Allow 28 days MAXIMUM FOR DELIVERY)**

**Save £2  
on normal  
price!**

OFFER  
CLOSES  
31/8/83



# KRAZEY-KEY



FIND the KRAZEY-KEY and use it to escape from the ever-changing maze in which you are caught. Move left with "i", right with "p", up with "q", and down with "z". When the invisible key is at your feet, a message to that effect will appear at the bottom of the screen and you can then pick it up by pressing "c". Take it to the exit to escape from the maze.

If, when your time has passed 50 there is still no sign of the key, it will flash on and off when you press "h". If the time passes 100 and you have not escaped, the KRAZEY-KEY will disintegrate and you will be trapped in the maze for ever.

Programmed for the 16K Spectrum by A Scanlon of Eccleshill, Bradford.

• • • • •

The Controller will pay £10 for each program published. Programs should be on cassette and can only be returned if a stamped-addressed envelope is enclosed.

```

1 GO SUB 25: BORDER 1: PAPER
1: CLS: INK 6: FOR a=1 TO 200:
PRINT AT INT (RND*22),INT (RND*3
2) " (isp) ": PRINT AT 0,0: a: NEXT
a: FOR a=0 TO 21: PRINT AT a,0:
" (isp) ": AT a,31: " (isp) ": NEXT a:
FOR a=0 TO 31: PRINT AT 0,a: " (i
sp) ": AT 21,a: " (isp) ": NEXT a
2 PRINT AT 0,0: "TIME=": AT 21,
29: " 0 (isp) ": AT 20,30: " ": AT 19,
30: " ": AT 18,30: " ": INK 5: LET
c#="no": LET axd=INT (RND*17+2):
LET axo=INT (RND*27+2): LET x=1
1: LET y=16: LET t=0
3 IF POINT (axo*8,172-(axd*8)
)=1 THEN GO TO 2
4 PRINT AT x,y: "a": LET f=y*8
: LET g=172-(x*8)
5 IF INKEY#="p" AND POINT ((f
+12),(g))=0 THEN LET y=y+1: PRIN
T AT x,y-1: " "
6 IF INKEY#="i" AND POINT ((f
-6),(g))=0 THEN LET y=y-1: PRINT
AT x,y+1: " "
7 IF INKEY#="q" AND x=1 AND
POINT ((f+1),(g+8))=0 THEN LET
x=x-1: PRINT AT x+1,y: " "
8 IF INKEY#="z" AND POINT ((f
+1),(g-12))=0 THEN LET x=x+1: PR
INT AT x-1,y: " "
9 LET o=INT (RND*29+1): LET d
=INT (RND*19+1): IF o=x AND d=y
THEN CLS: PRINT AT 1,0: "Unlucky
, a wall materialised on the spo
t where you stood and killed
you!": PRINT AT 21,0: "Press any
key.": BEEP 1,0: PAUSE 0: RUN
10 IF INT (RND*10+1)>6 THEN PR
INT AT d,0: " (isp) ": IF INT (RND*
10+1)>4 THEN PRINT AT INT (RND*1
9+1),INT (RND*29+1): " "
11 PRINT AT 0,5: INT (t/10): OV
ER 1: AT 0,5: " (2*isp) "
12 LET t=t+3: IF INKEY#="h" AN
D c#="no" AND t/10>50 THEN PRINT
AT axd,axo: "b": PAUSE 10: PRINT
AT axd,axo: " "
13 PRINT AT x,y: "a": AT 21,30: "
0": IF INKEY#="t" THEN RUN
14 IF t/10>100 THEN CLS: INK
7: PRINT AT 1,0: "Sorry 100 secon
ds have elapsed since you start
ed. The key has dis
integrated, you are trapped in
the KRAZEYMAZE forever!": BEEP
1,0: PRINT AT 21,0: "Press any k
ey": PAUSE 0: RUN
15 IF x=axd AND y=axo AND c#="
no" THEN GO TO 18
16 IF x=21 AND y=30 AND c#="ca
rry" THEN GO TO 23
17 GO TO 3
18 PRINT AT 21,0: "The key is a
t your feet"
19 BEEP 1,1,-50
20 IF INKEY#="c" THEN PRINT AT
21,0: " (29*isp) 0 (isp) ": GO TO 2
2
21 PRINT AT 21,0: " (29*isp) 0 (i
sp) ": GO TO 3
22 LET c#="carry": GO TO 3
23 CLS: PRINT AT 5,5: "CONGRAT
ULATIONS": PRINT: PRINT "You fo
und the magic key in ": INT (t/10
): " seconds.": BEEP 1,0: PRINT A
T 21,0: "Press any key.": PAUSE 0
: RUN
24 PAUSE 0: RUN
25 FOR a=1 TO 2: READ a$: FOR
b=0 TO 7: READ c: POKE USR a$+b,
c: NEXT b: NEXT a: RETURN
26 DATA "b",BIN 00011000,BIN 0
0011100,BIN 00011110,BIN 0001110
0,BIN 00011000,BIN 00011100,BIN
00111110,BIN 01111111
27 DATA "a",BIN 00011100,BIN 0
0011100,BIN 00001000,BIN 0011111
0,BIN 01001001,BIN 01011101,BIN
00010100,BIN 00010100

```





HI ! I'M BRAINY and I really rate computers. I'm in Load Runner every issue so write to me at 196-200 Balls Pond Road, London N1 4AQ and I'll do my best to answer any questions you have.

Remember, Brainy's the name and, by the way, I will pay £1 to anyone who's name is mentioned. Write away!

## BRAINY'S BRAINBOX

### **Spectrum too hot to handle?**

MY COMPUTER, a 16K Spectrum, overheats after 45 minutes. Could you help me as you're very clever?

*Sheikh Rahman,  
London SW19*

BRAINY BY NAME, Brainy by nature. It sounds as if there is nothing to worry about if, that is, your Spectrum is just getting hot. That is normal. If, however, your computer turns itself off and then on again, losing its memory, there is a big problem. In that case, return the computer to the shop and have it replaced; if you bought it by mail order, post it to the place from which you bought it. Use recorded delivery.

### **Can the BBC use Acorn tapes?**

COULD YOU tell me if the programs which work on the BBC computer, work on the Acorn Atom? My school has a BBC computer and uses the tapes my Acorn Atom computer uses.

*Scott Tinsley, Scawsby,  
Doncaster.*

ARE YOU sure your computer uses exactly the same tapes as the school's BBC? Some companies pub-

lish the same titles for different machines. Anyway, there is a chip available for the Acorn Atom which enables it to use simple BBC Basic and therefore, presumably, to accept simple BBC tapes.

There is no easy way I know in which the BBC computer can be told to accept Acorn tapes. It is easier to try to adapt programs for the Acorn Atom to the BBC.

If anyone has found that BBC and Acorn Atom tapes can be used interchangeably, I would be very interested to hear. Perhaps Scott's computer has read about Paul's computer in Time Plan 9?

### **How to lose the TI blues**

I OWN a TI99/4a computer and when I type-in a game from a magazine and then type RUN, the computer says—Incorrect Statement in line? When I try to correct the faulty line, I still get an Error message for another line. Another problem I have is trying to save my programs on a cassette recorder.

*P Tompkins,  
Harrow, Middlesex.*

TRY GOTO 1 instead of RUN and, if you don't already, use capitals instead of small letters. There is a good book called *Learning to use the*

TI99/4a computer, £4.95, which offers many useful tips.

As for your saving problems, make sure you are using upper-case letters and have your volume set at the correct level. Use a ready-recorded tape and keep loading, starting with the volume in the middle, each time adjusting it a little higher until it works. Then try saving using that volume.

If none of these work, I am afraid it is probably a fault in the computer or recorder.

### **In search of the good computer**

I WONDER if you could help me in the search for a good computer?

It should have good graphics capability; a range of good-quality, low-priced software; a fair amount of RAM—16K plus; a good amount of educational programs.

It should also have a good keyboard—not touch-sensitive. One last thing—it must be around £150.

*William Fiskien, Lincoln*

IT'S A TALL order but it sounds as if the Spectrum 48K would be best for you. It costs around £130 and fits most of the categories—in fact, all of them, with press-down rubber keys and a range of not-too-expensive software, both educational and arcade programs. The Vic-20, having only 3K, has its own tape recorder and books and costs about £150. Perhaps the Electron will suit you but that will not be easy to buy before Christmas.

### **Watch out—there's a thief about**

THE BOY next door, Paul Brennan, had his Spectrum stolen by a burglar a few days ago. The burglar clearly knew what he was doing as he collected together all the bits and pieces. If you live in south Birmingham and someone tries to sell you a six-month-old Spectrum cheap, tell the police.

Don't let it happen to you. Keep your computer hidden safely and write down the serial number for your parents. It is awful to lose your micro.

# Atari 400



## Specifications

Price		£149.95
Number sold		100,000 +
How sold		Assembled
Processor		6502
Standard RAM		16K
Expansion RAM		—
Basic + Operating system		8K cartridge
Display	Colour	16 lines × 32 characters
Tape recorder		Manufacturer's
Backing storage	Optional	disc drives

## Software

Atari, Atari House, Railway Terrace, Slough, Berkshire SL2 5BZ.

Most Atari software packages are available from Silica Shop, 1-4 The Mews, Hatherley Road, Sidcup, Kent.

## Comments

The machine is regarded by many people as a games machine. It can, however, run business software which includes a word processor and accounts package. Other languages, apart from Basic, are available on cartridges which slot into the machine. The languages include Pilot and Logo.

An upgraded version of the 400, the 800, is available. It has 48K RAM and a proper typewriter-style keyboard. Apart from those differences, the 800 is like the 400. Most software written for the 400 will run on the 800 and vice versa.

**Atari U.K. Ltd,**  
Atari House,  
Railway Terrace,  
Slough, Berkshire.



# TRUMBULL'S WORLD

**MARC AND JAN HAVE ENTERED THEIR FATHER'S COMPUTER ADVENTURE WORLD TO SEARCH FOR THE FIVE SHATTERED PIECES OF A CLASP. THE CLASP IS A DIGITISED REPRESENTATION OF THE EQUATION THAT WILL ENABLE OVERCROWDED MANKIND TO JUMP TO ANOTHER GALAXY. THE CHILDREN COME FACE TO FACE WITH SOMEONE RESEMBLING TRUMBULL AND MARC HAS TO MAKE A DIFFICULT DECISION...**

MARC REACHES TOWARDS THE BURNING ARM...



WHAT DO I DO, FATHER?

I DON'T THINK THAT'S...

MARC! DON'T! IT ISN'T FATHER!!

POWER CASCADES AROUND THE CANYON!!



GIVE ME THE CLASP, BOY!

MARC! WHAT'S THAT?

SCRIPT:  
ROB BEATTIE  
ARTWORK:  
MALCOLM STOKES  
LETTERS:  
STEVE POTTER

THE GAME INFORMS THE PLAYERS...

TOUCHING THE HAND  
ACHIEVES NOTHING  
AND IS PAINFUL  
THERE IS NO SECOND  
SHARD HERE  
(STILL, YOU MADE  
IT TO CHECK ONE)

MARC  
LOOK AT THE  
BIRD!

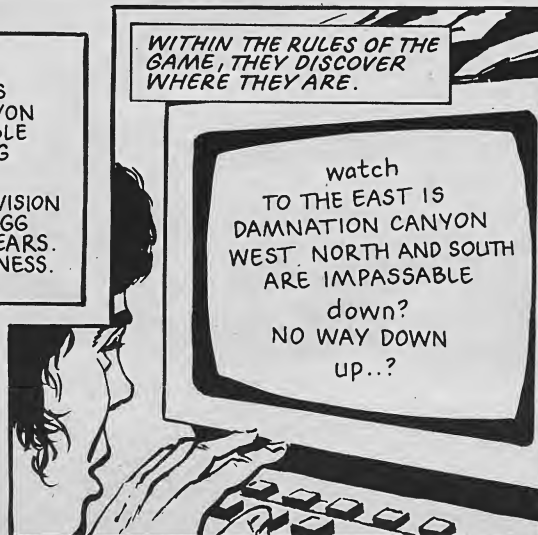
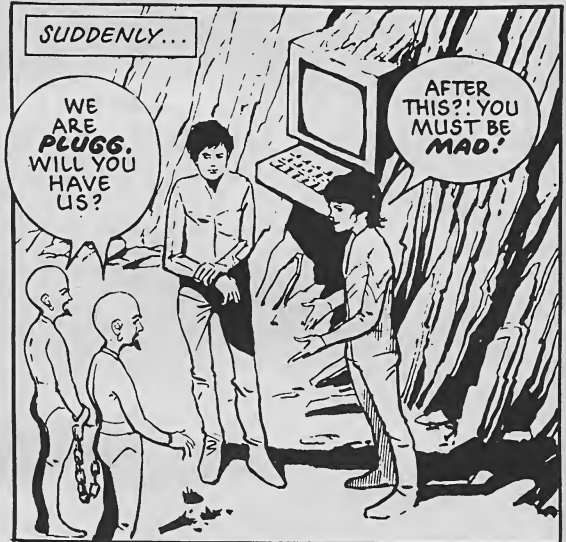
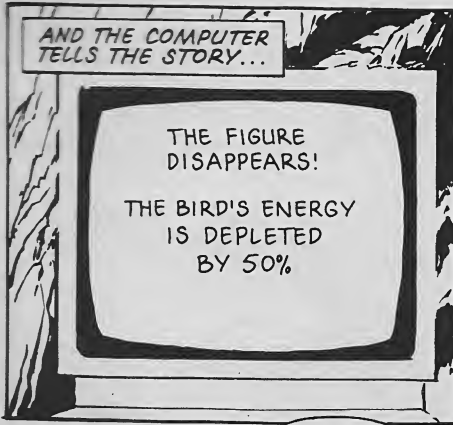
THE BIRD SPINS, THE  
FIGURE CRUMBLES!



NOOOO!!

MARC!  
LOOK!



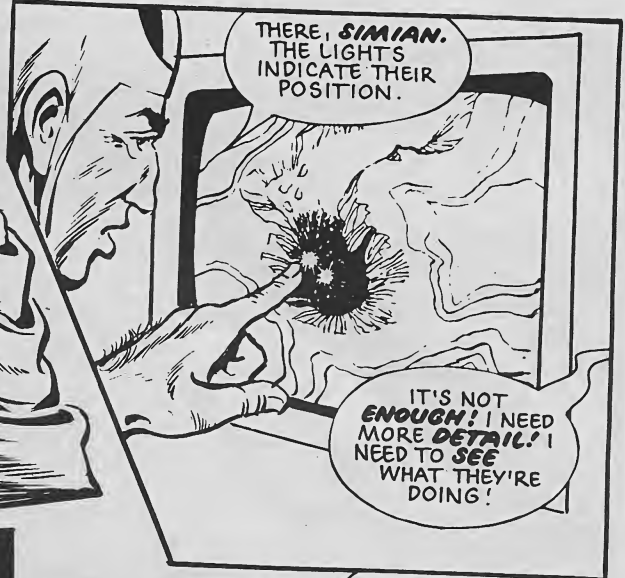




AND OUTSIDE THE GAME, THE GOVERNMENT, LED BY THE EVIL **SIMIAN**, SEARCHES FOR A WAY IN...



THE IMAGE IS NOT DETAILED ENOUGH. WHERE ARE THERE **LAN**?



THERE, **SIMIAN**. THE LIGHT'S INDICATE THEIR POSITION.

IT'S NOT **ENOUGH!** I NEED MORE **DETAIL!** I NEED TO **SEE** WHAT THEY'RE DOING!

**TRUMBULL'S** GENIUS IS HARD TO OVERCOME...



HIS PROGRAMMING MIND WAS LEGENDARY, **SIMIAN**.

AND HIS COMPUTER-WORLD IS ALMOST **INVULNERABLE**, LORD.

NEVERTHELESS, I **MUST** SEE WHAT THEY'RE DOING, SO I HAVE A **SPECIAL PROJECT** FOR YOU AND **EMES**.



WE ARE HONOURED.

**SIMIAN** STARES AT THE WORLD, INFLAMED BY GREED.



I HAVE THE DESIGNS FOR A BOX WHICH WILL IMITATE THE '**RULES**' OF **TRUMBULL'S WORLD** AND LET MYSELF AND ONE OTHER GAIN **ACCESS** TO HIS COMPUTER GAME.

SO **THAT** IS WHY YOU BADE ME SUMMON THE HUNTER?

**SIMIAN** SEEMS STRANGELY WEARY.



YES, THE **HUNTER**...

LORD. DID I DO WRONG?



NO. IT IS GOOD. I **WILL** HAVE THAT EQUATION, **TRUMBULL**. AND NEITHER **YOU** NOR YOUR **PITIFUL OFFSPRING** WILL STOP ME!

AND WHILE *SIMIAN* PLOTS...



I **TOLD**  
YOU IT WAS  
IMPOSSIBLE!

OH,  
SHUT UP  
AND KEEP  
CLIMBING!



INCH AFTER INCH  
THEY CLIMB...

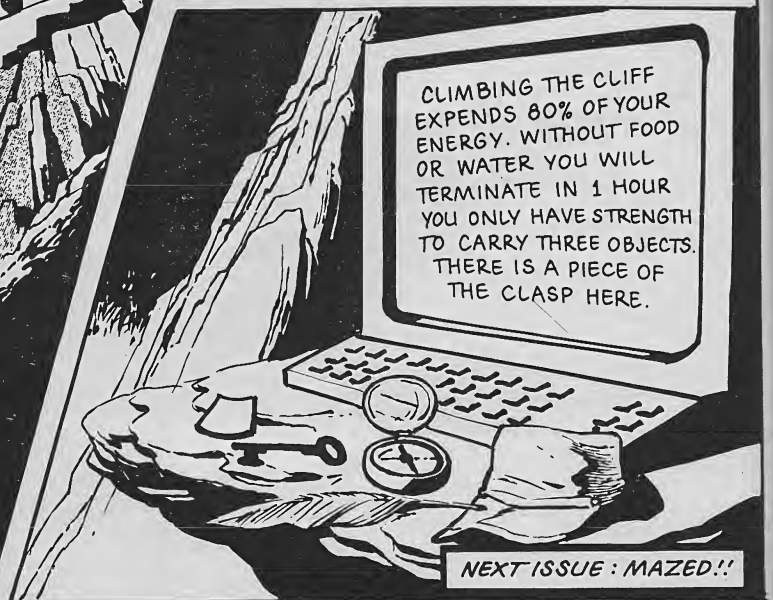


AT  
LAST!



THANK  
**HEAVENS**  
IT'S  
OVER.

I HAVE  
A FEELING  
IT'S ONLY  
JUST BEGUN.  
**LOOK.**



CLIMBING THE CLIFF  
EXPENDS 80% OF YOUR  
ENERGY. WITHOUT FOOD  
OR WATER YOU WILL  
TERMINATE IN 1 HOUR  
YOU ONLY HAVE STRENGTH  
TO CARRY THREE OBJECTS.  
THERE IS A PIECE OF  
THE CLASP HERE.

NEXT ISSUE: MAZED!!



ON SCREEN

# WAR GAMES

**T**HE LATEST SMASH from the States is about to hit cinemas in Britain. It is *War Games*, the exciting story of a 17-year-old home computer addict who almost starts World War III and then is the only one who can stop it.

David Lightman, played by Matthew Broderick, uses his home computer for a variety of bewildering and often illegal pastimes. He links into vast communications networks and 'talks' to other users; he taps into large computer banks and changes data, including his high school grades; he makes pirate copies of new video games before they have reached the streets.

All 'harmless' fun, until the day David accesses accidentally into a mysterious computer system which is playing the biggest and most dangerous computer game in the world—the Defense Department War games computer Joshua. David challenges Joshua to a thrilling game of global thermonuclear war, a game being played for real.

As the two major world powers prepare to annihilate each other, David realises what he has done and tries desperately to locate the man who taught Joshua to think. He has 27 hours 59 minutes to do so.

Using multi-million-dollar sets and an incredible array of electronic and computer equipment, *War Games* is one of the first motion pictures to portray the new computer-based technological society—the society young people understand a good deal better than their parents. *War Games* opens at the Odeon, Leicester Square on August 18 and at major towns in the provinces on September 15. Don't miss it.

*Top left: Jennifer, David and Professor Falken in the NORAD control room.*

*Middle left: David displays his arcade skills to a friend*

*Bottom left: Jennifer and David awed by the sight of the NORAD computer.*



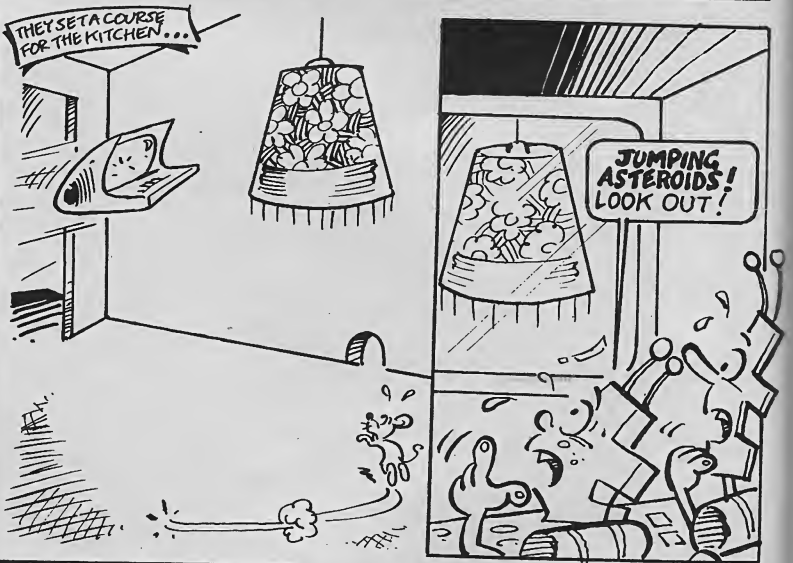
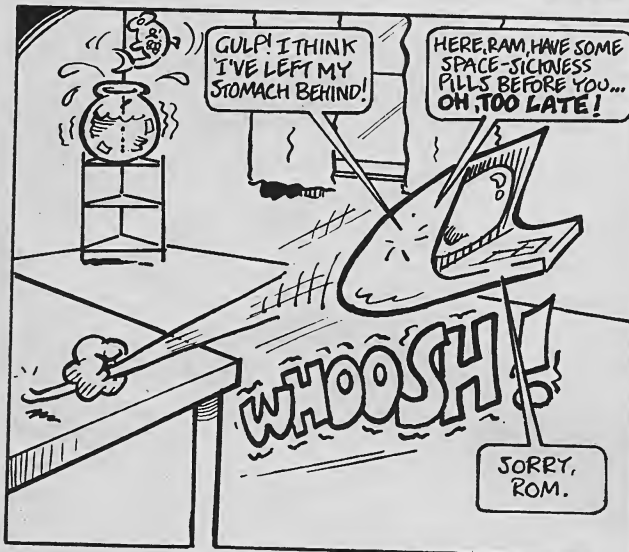
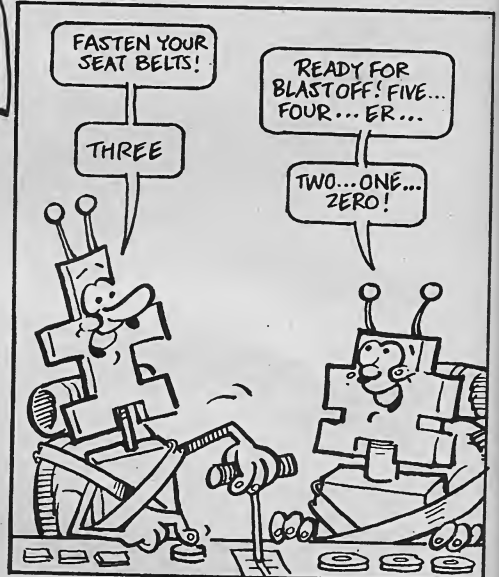
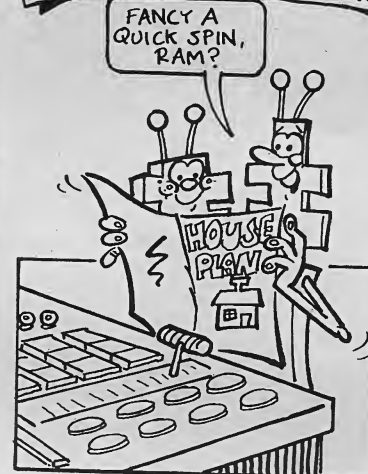


# THE ADVENTURES OF ROM AND RAM

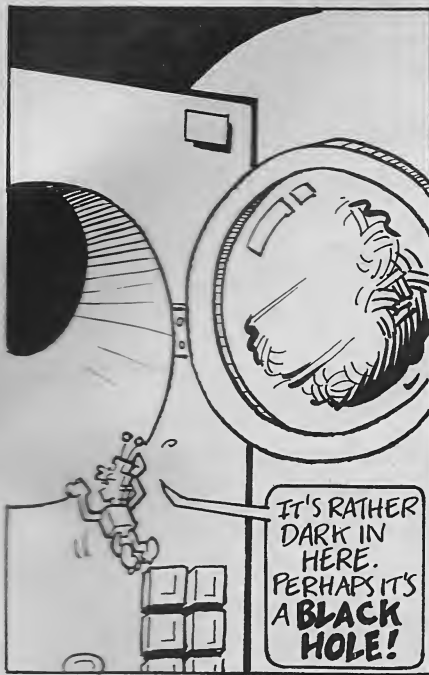
IN THE DEAD OF NIGHT, STRANGE SOUNDS ARE COMING FROM "DUNZAPPIN"...



INSIDE THE COMPUTER OUR PECULIAR SPACE INVADER LOOK-ALIKES FROM THE PLANET ZILLYKON PLAN A SECRET EXPEDITION TO SPY ON THE TERRITORY KNOWN AS "THE KITCHEN"







IT'S RATHER DARK IN HERE. PERHAPS IT'S A **BLACK HOLE!**



TEMPTATION IS TOO MUCH FOR ROM...

SNEEZE!

I'LL TRY THIS BUTTON!



HMM! THE GRAPHICS ARE QUITE **LIFELIKE!**

GURGLE! HELP! I'M DROWNING!

YOU'VE ALWAYS GOT TO PLAY THE **FOOL**, HAVEN'T YOU? HANG ON, I'LL LET YOU OUT!



BY ZILLYKON, RAM, WHAT WERE YOU DOING IN THERE?

HELP!

DID YOU ENJOY YOUR QUICK SPIN, THEN?

SOMETIMES ROM, YOU CAN BE VERY **CHILDISH!**



WHAT'S GOING ON DOWNSTAIRS?

MAYBE SOMEONE'S TRYING TO **STEAL** OUR **COMPUTER!**



WHAT A **MESS!** AND WHAT'S THE COMPUTER DOING IN THE KITCHEN??

I BET DAD'S BEEN HAVING A CRAFTY PLAY WITH OUR NEW GAME PROGRAM! BUT THAT DOESN'T EXPLAIN THE WATER!



NEXT MORNING

I REALLY THOUGHT YOU WERE ALL **WASHED-UP** THAT TIME!

I'M GLAD YOU FIND IT SO AMUSING. LOOK OUT! IT'S **GAME TIME** AGAIN!



OH BOY, THIS NEW "SUBMARINE ATTACK" GAME IS GREAT!

GLUG! GLUG! GURGLE!

OH NO! NOT AGAIN! GLUG!

MORE ADVENTURES WITH **ROM & RAM** NEXT PRINTOUT!



# COMPUTATIONS

THIS WEEK'S word/square includes six words describing machines and conditions which computers can control. Can you find them?

## Wordplotter 4

T A E H T I P  
O L G L I S R  
B A I T N G I  
O R J G O H N  
R M R O H I T  
E F B G N T E  
P L O T T E R

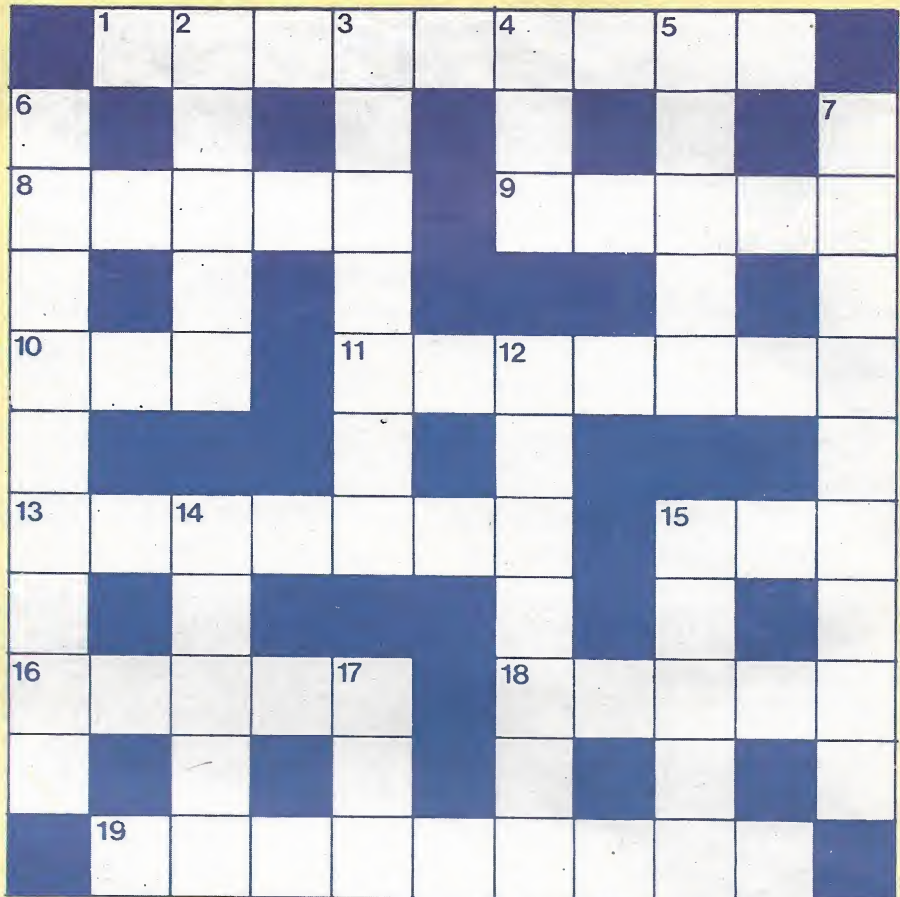
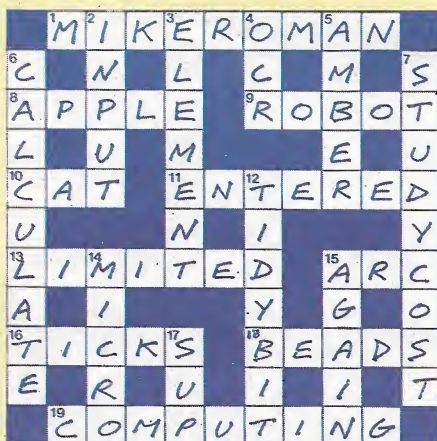
FINIUS THE FROG is that star of the arcade favourite Frogger. Of late he has been trying to decide how long it will take him to get across the road on which so many of his friends have been squashed. He has worked out that in one minute he takes three hops forward and two backwards to avoid the oncoming cars. The road is 10 hops wide. How many minutes will it take to cross the road?

ANSWERS to the puzzles in last printout:  
The word square included the words: MONITOR, SCREEN, CHIP, DISC, LEN and MEMORY.

It took six hours for the oil to run out of the car of the future.

### WORDPLOTTER 3 SOLUTION

The Controller regrets the error in last printout's Wordplotter grid. The correct grid, with the answers, is below.



### Across

1. The job of sorting out 2—with insecticide? (9)
8. Program language from round a Pacific island (5)
9. Little cuts he gets when stealing (5)
10. Go wrong with hesitation run from start (3)
11. Invader shield executed by program in scientific language (7)
13. People who make you go to bed when you've nearly beaten high score! (7)
15. The giant home of the Personal Computer (3)
16. You'd use the computer all through it except for 13 (5)
18. Home of business software (5)
19. Program instruction taken by a policeman (9)

### Down

2. 10 or its incorrect result (5)
3. How computing raises our spirits! (7)
4. Weapon behind the TV screen (3)
5. Less unpleasant hard water in a little German number (5)
6. Getting hold of data with a credit card? (9)
7. How the computer expresses any bit of data (2,1,6)
12. What to do to the boy with a posh new micro-attack! (4,3)
14. 0 or 1 in binary (5)
15. How jealous I am of the big computer user! (1,4)
17. Little drink for a little child (3)

Next printout August 18

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